7.0 ALTERNATIVES TO THE PROPOSED PROJECT

The California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) include a discussion of reasonable project alternatives that would "feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any significant effects of the project, and evaluate the comparative merits of the alternatives" (CEQA Guidelines Section 15126.6). This chapter identifies potential alternatives to the proposed Project and evaluates them, as required by CEQA.

Key provisions of the CEQA Guidelines on alternatives (Section 15126.6(a) through (f)) are summarized below to explain the foundation and legal requirements for the alternatives analysis in the EIR.

- *"An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation" (15126.6(a)).*

- *"The discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly" (15126.6(b)).*

- *"The range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. The EIR should briefly describe the rationale for selecting the alternatives to be discussed. The EIR should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination" (15126.6(c)).*

- *"The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed" (15126.6(d)).*

- *"The specific alternative of 'no project' shall also be evaluated along with its impact" (15126.6(e)). "The no project analysis shall discuss the existing conditions at the time the Notice of Preparation is published, and*

at the time the environmental analysis is commenced, as well as what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives" (15126.6(e)(2)).

"The discussion of the 'no project' alternative will usually proceed along one of two lines" 15126.6(e)(3):

(A) *When the project is the revision of an existing land use or regulatory plan, policy or ongoing operations, the 'no project' alternative will be the continuation of the existing plan, policy or operation into the future. Thus, the projected impacts of the proposed plan or alternative plan would be compared to the impacts that would occur under the existing plan.*

(B) *If the project is other than a land use or regulatory plan, for example a development project on identifiable property, the 'no project' alternative is the circumstance under which the project does not proceed. The discussion would compare the environmental effects of a property remaining in its existing state against environmental effect which would occur if the project is approved. If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this 'no project' consequence should be discussed. In certain instances, the no project alternative means 'no build' wherein the existing environmental setting is maintained. However, where failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project's non-approval.*

(C) *After defining the no project alternative using one of these approaches, the lead agency should proceed to analyze the impacts of the no project alternative by projecting what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community service.*

- *"The range of alternatives required in an EIR is governed by a 'rule of reason' that require the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project" (15126.6(f)).*

- *"Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability or infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent)" (15126.6(f)(1)).*

- *For alternative locations, "only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR" (15126.6(f)(2)(A)).*

- *"An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative" (15126.6(f)(3)).*

Per the CEQA Guidelines Section 15126.6(d), additional significant effects of the alternatives are discussed in less detail than the significant effects of the Project as proposed.

For each alternative, the analysis: (1) Describes the alternative; (2) Analyzes the impact of the alternative as compared to the proposed Project; (3) Identifies the impacts of the Project which would be avoided or lessened by the alternative; (4) Assesses whether the alternative would meet most of the basic project objectives; and (5) Evaluates the comparative merits of the alternative and the project.

7.1 PROJECT OBJECTIVES

As described in Section 3.4 of this EIR, the objectives below have been established for the proposed Project and will aid decision makers in the review of the Project and associated environmental impacts. For purposes of the Alternatives to the Proposed Project analysis, the following objectives will be referred to as Objectives 1 through 7:

Objective 1) Minimize congestion on the local circulation network and provide a continuous connection from Lincoln Avenue to Green River Road;

Objective 2) Accommodate planned circulation needs by providing the extension of Foothill Parkway consistent with the City of Corona Circulation Element;

Objective 3) Provide a roadway design that is sensitive to the environmental resources in the study area and minimizes, to the extent feasible, impacts to sensitive plant and wildlife species, while providing adequate geometric design to minimize safety hazards and maximize operational efficiency;

Objective 4) Develop a roadway design that is compatible with the provisions of the Western Riverside County Multi-Species Habitat Conservation Plan (MSHCP);

Objective 5) Improve air quality in the South Coast Air Basin by providing system improvements that would reduce traffic congestion, and thereby the amount of pollutants generated;

Objective 6) Avoid impacts to the Cleveland National Forest; and

Objective 7) Implement circulation improvements that will provide enhanced public services access (i.e., emergency response) to existing and planned uses in the area.

7.2 DESIGN REFINEMENTS CONSIDERED DURING THE PROJECT PLANNING PROCESS

As noted in Section 3.0, PROJECT DESCRIPTION, Foothill Parkway has been a master planned facility by both the City and County since the 1980's. In November 1985, the City adopted the roadway as a four-lane arterial highway. The conceptual alignment for the Foothill Parkway Westerly Extension was again recognized and approved with the update of the City's *General Plan* Circulation Element in 2004, as well as the 1990 *Riverside County Comprehensive General Plan* (RCCGP). The proposed Foothill Parkway alignment varies in location from the previous concept alignment adopted in the 1980s. In order to meet minimum roadway design standards (e.g., turn lane requirements, spacing of intersections, local street access criteria, and design speed) the alignment location has been shifted to the north from the previous alignment.

In 2006, the conceptual phase of design was completed and the concept design was approved by the City of Corona. During the preliminary design process, eight design refinements of the concept design were considered in the development of the proposed Project. These eight design refinements considered the horizontal and vertical alignment of Foothill Parkway in order to evaluate which alignment of Foothill Parkway would best achieve the objectives of the Project, achieve the goals and policies of the City's *General Plan* and *Municipal Code*, and minimize impacts of the proposed alignment to adjacent properties, including but not limited to impacts to the Cleveland National Forest and the Mabey Canyon Debris Basin, as well as the built and open space environment. Balancing of earthwork and the incorporation of trails into the design further refined the Project. The eight design refinements considered are briefly described below. Refer to Figure 7-1, DESIGN REFINEMENT LOCATIONS, for an illustration of the designs considered. The proposed alignment was determined to have the greatest feasibility for construction, while minimizing environmental impacts, including but not limited to impacts to the Cleveland National Forest and the Mabey Canyon Debris Basin.

DESIGN REFINEMENT 1

Design Refinement 1 is a minor revision of the approved concept design for the Foothill Parkway Westerly Extension. It consisted primarily of an update to the east and west limits of the Project site based on more recent topographic information; a horizontal shift of the west end to accommodate a 10-foot, rather than 4-foot, median; and revision of the horizontal curves to a minimum 1,100-foot radius to eliminate the need for superelevation. One curve remained at a 900-foot radius, due to adjacent constraints, and would require a three percent superelevation. A maximum seven percent grade was maintained for this design. Minor changes

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8/22/08 JN 10-104629-13633

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Design Refinement Locations

Figure 7-1

Back of 11 x 17 page

were made in the alignment at the east end of the Project to reduce impacts to the an adjacent property. No changes were made to the alignment where it crossed the Mabey Canyon Debris Basin. At the 108-inch Metropolitan Water District (MWD) feeder line, the alignment was also unchanged. A bridge placed approximately 50 feet above original ground had been identified as the preferred crossing structure during the concept design phase. This design served as the "base alignment", from which other design refinements were developed.

DESIGN REFINEMENT 2

Design Refinement 2 is a revision of Design Refinement 1, in which modifications were made to the alignment near Mabey Canyon Debris Basin. In Design Refinement 1, the proposed alignment crossed the Mabey Canyon Debris Basin on the south side of the existing dam. In Design Refinement 2, Foothill Parkway was shifted north, to place half of the roadway embankment on the existing dam and the other half of the roadway on a bridge, thus reducing impacts and required modifications to the basin. However, this design was not considered further because the cost of the bridge was significantly higher than the cost of grading improvements to the basin, without significant environmental benefit. Also, it was uncertain whether there would be constructability issues with the bridge/fill combination.

DESIGN REFINEMENT 3

Design Refinement 3 is a revision of Design Refinement 1. Similar to Design Refinement 2, its purpose was primarily to investigate options at Mabey Canyon Debris Basin. In this case, the roadway was shifted to cross the basin at its midsection, and a bridge was assumed at that location. The cost, benefits, and disadvantages of this design refinement were evaluated against those of Design Refinements 1 and 2. Additionally, the alignment was shifted horizontally at the west end to reduce potential impacts to the Cleveland National Forest and private properties. However, this design was not considered further because the cost of the bridge was significantly higher than the cost of grading improvements to the basin, without significant environmental benefit. The horizontal alignment shift at the west end of the project was incorporated into Design Refinement 4.

DESIGN REFINEMENT 4

Design Refinement 4 is also a revision of Design Refinement 1. Similar to Design Refinement 3, Design Refinement 4 included a horizontal shift of the west end, this time to eliminate the need for retaining walls at the Cleveland National Forest. No change was made to the alignment near Mabey Canyon Debris Basin from Design Refinement 1. However, this design was enhanced and further refined in Design Refinement 5.

DESIGN REFINEMENT 5

Design Refinement 5 is a revision of Design Refinement 4. Design Refinement 5 incorporated wider parkways to the west end of the Project, in the large fill section in Wardlow Canyon. A horizontal shift of the alignment in this location was necessary

to accommodate the wider section while still avoiding impacts to the Cleveland National Forest. Under this design refinement, a maximum seven percent grade was used in the Wardlow Wash segment. The earthwork showed a large surplus of material that would need to be distributed throughout the Project site or disposed of off-site. The crossing over the MWD feeder line was assumed to be a bridge approximately 50 feet above grade.

Two additional profiles were studied for this horizontal alignment to explore options for the MWD crossing. The first profile incorporated a grade of eight percent through Wardlow Canyon, while maintaining the original profile through the cut section west of Mabey Canyon. While maintaining the same elevations through the large cut west of Mabey Canyon Debris Basin, the profile at MWD line was lowered to 20 feet above existing ground. The second profile was developed that also used a grade of eight percent through Wardlow Canyon, but was not controlled by the original profile near Mabey Canyon. In this case, fill to a maximum height of 6-feet was assumed over the MWD line, consistent with the MWD easement restrictions. The profile ascended at eight percent grade to the crest of the vertical alignment. With this profile, it was expected that a structure would not be needed over the pipe, thus eliminating costs for a bridge or similar structure. However, the second profile was not considered further because it would have caused a greater imbalance in the earthwork. The first profile, located 20 feet above existing grade at the MWD line, was preferred. However, the horizontal and vertical alignment of this design was further refined in the following design refinements.

DESIGN REFINEMENT 6

Design Refinement 6 is a revision of Design Refinement 5, with the eight percent grade and a 20-foot high structure at MWD. The purpose of this design refinement was to allow for an open drainage channel to flow continuously through Wardlow Wash by providing adequate clearance in Wardlow Canyon between the base of the westerly toe of fill slope and the Cleveland National Forest. Three alignments were developed and compared with Design Refinement 5. All three of the alignments resulted in increased noise impacts to adjacent properties, increased costs, and less-favorable roadway geometries, and were not considered further.

DESIGN REFINEMENT 7

Design Refinement 7 is also a revision of Design Refinement 5. Design Refinement 7 studied the realignment of Foothill Parkway to avoid Mabey Canyon Debris Basin completely. The roadway was shifted south into the adjacent properties west of Mabey Canyon and continued south of the basin to tie back into Design Refinement 5. Design Refinement 7 was not considered further due to significant right of way impacts, as well as an even greater earthwork imbalance.

DESIGN REFINEMENT 8

Design Refinement 8 is a revision of Design Refinement 5. Design Refinement 8 was developed to reduce the horizontal curves along the proposed eight percent grade in Wardlow Canyon. This modification was not considered further because straightening out the alignment in this area did not produce any significant benefits, and appeared to cause greater potential for speeding on the steep grade.

7.3 ALTERNATIVES SELECTED FOR FURTHER ANALYSIS

In accordance with CEQA Guidelines, Section 15126.6, the following Section describes a range of reasonable Alternatives to the proposed Project, which could feasibly attain most of the basic objectives of the proposed Project but would avoid or substantially lessen any of the significant effects of the Project, and evaluate the comparative merits of each Alternative. The analysis focuses on Alternatives capable of eliminating significant adverse environmental effects or reducing them to less than significant levels, even if these Alternatives would impede, to some degree, the attainment of the Project objectives. Potential environmental impacts associated with six separate Alternatives are compared to impacts from the proposed Project, below. These Alternatives include the following:

- "No Project" Alternative;
- "No Border Avenue or Chase Drive/Mangular Avenue Connection" Alternative;
- "With Chase Drive/Mangular Avenue Connection" Alternative;
- "With Border Avenue Connection" Alternative;
- "Reduced Width" Alternative; and
- "Stone Bridge Avoidance" Alternative.

The "Environmentally Superior" Alternative, as required by CEQA, is described in Section 7.4, "ENVIRONMENTALLY SUPERIOR" ALTERNATIVE. Table 7-1, SUMMARY OF ALTERNATIVES, provides a summary of the relative impacts of each Alternative. A complete discussion of each Alternative is provided below.

Table 7-1
Summary of Alternatives

Alternative	Description	Basis for Selection and Summary of Analysis
Proposed Project	• Foothill Parkway Westerly Extension as a four-lane roadway, with connections to Chase Drive/Mangular Avenue and Border Avenue	
No Project	• Westerly extension of Foothill Parkway is not constructed • Existing vacant land is maintained	• Required by CEQA • Avoids significant impacts of the proposed Project • Does not meet Project objectives
No Border Avenue or Chase Drive/Mangular Avenue Connection	• Foothill Parkway Westerly Extension as a four-lane roadway • No Chase Drive/Mangular Avenue or Border Avenue connections to Foothill Parkway	• May lessen some impacts • Does not avoid significant environmental impacts • Meets all Project objectives, but not to the degree of the proposed Project
With Chase Drive/Mangular Avenue Connection	• Foothill Parkway Westerly Extension as a four-lane roadway, with connection to Chase Drive/Mangular Avenue • No Border Avenue connection to Foothill Parkway	• May lessen some impacts • Does not avoid significant environmental impacts • Meets all Project objectives, but not to the degree of the proposed Project
With Border Avenue Connection	• Foothill Parkway Westerly Extension as a four-lane roadway, with connection to Border Avenue • No Chase Drive/Mangular Avenue connection to Foothill Parkway	• May lessen some impacts • Does not avoid significant environmental impacts • Meets all Project objectives, but not to the degree of the proposed Project
Reduced Width	• Foothill Parkway Westerly Extension as a two-lane roadway, with connections to Chase Drive/Mangular Avenue and Border Avenue	• May lessen some impacts • Does not avoid significant environmental impacts • Meets most Project objectives, but not to the degree of the proposed Project
Stone Bridge Avoidance	• Foothill Parkway Westerly Extension as a four-lane roadway, with connections to Chase Drive/Mangular Avenue and Border Avenue • Revised grading concept of Mabey Canyon Debris Basin by lowering the basin floor, maintaining the existing basin perimeter	• Meets all Project objectives, but not to the degree of the proposed Project • Intended to avoid impacts to the historic arroyo stone footbridge, however, is infeasible. Therefore, does not avoid significant cultural impacts

7.3.1 "NO PROJECT" ALTERNATIVE

DESCRIPTION OF ALTERNATIVE

As indicated above, CEQA Guidelines Section 15126.6(e) states "*the 'no project' analysis shall discuss the existing conditions at the time the Notice of Preparation is published, and at the time the environmental analysis is commenced, as well as what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services".*

The "No Project" Alternative serves as the baseline against which to evaluate the effects of the proposed Project alignment and other Project Alternatives. The No Project Alternative would not result in the construction of the proposed alignment. Future traffic volumes would be accommodated by existing or other planned roadways in the City. The No Project Alternative would produce no direct environmental impacts within the Project area or surrounding areas. However, the No Project Alternative may exacerbate existing deficiencies experienced along Ontario Avenue. Potential indirect impacts which may result from implementation of the No Project Alternative are discussed below.

IMPACT COMPARISON TO THE PROPOSED ALIGNMENT

Unlike the proposed Project, the No Project Alternative would not be consistent with the ultimate buildout of local and regional planning documents that include the westerly extension of Foothill Parkway. However, the No Project Alternative would not result in any of the environmental impacts associated with the construction and development of the proposed alignment. The No Project Alternative would avoid potential impacts resulting from alteration of the Project site's physical characteristics and construction of a roadway extension and impervious surfaces. Maintaining the Project site in its existing condition would also eliminate potential impacts.

Implementation of the No Project Alternative would avoid the environmental impacts identified for the proposed Project alignment; however, the No Project Alternative would not preclude the potential for implementation of the roadway extension at some future date. The connection of Foothill Parkway from its current terminus to Green River Road has been envisioned in local and regional planning documents for numerous years. Given the level of existing and planned development in southern Corona, it may be anticipated that the westerly extension of Foothill Parkway, if not constructed at this time, would be proposed for construction at a future date. The No Project Alternative would not require the City to acquire right-of-way (R/W) from several adjacent properties.

Specific short-term construction impacts and long-term operational impacts are discussed below for each section included in this EIR.

Land Use and Planning

Implementation of the proposed alignment may result in land use compatibility and access impacts to surrounding uses. The proposed Project would result in less than significant impacts related to land use compatibility and access with implementation of recommended Mitigation Measures 5.4-1a, 5.4-1b, and 5.4-4 in Section 5.4, TRAFFIC AND CIRCULATION; Mitigation Measures 5.5-1a through 5.5-1d in Section 5.5, AIR QUALITY; and Mitigation Measures 5.6-1a through 5.6-2 in Section 5.6, NOISE. Unlike the proposed Project, the No Project Alternative would not alter current conditions. Therefore, no land use compatibility and access impacts would result under the No Project Alternative. Therefore, the No Project Alternative would result in a lesser impact than the proposed Project in this regard.

The westerly extension of Foothill Parkway is identified within the *City of Corona General Plan* as being required to help alleviate congestion on the east/west routes within the City. The proposed westerly extension of Foothill Parkway is consistent

with the *City of Corona General Plan* Circulation Element, *Riverside County Comprehensive General Plan* (RCCGP)*, South Corona Community Facilities Plan* (CFP), *Regional Transportation Improvement Program* (RTIP), *Regional Transportation Plan* (RTP), and *Regional Comprehensive Plan and Guide* (RCPG). Implementation of the No Project Alternative, however, would not be consistent with the ultimate buildout of the City's *General Plan* or planned regional transportation improvement projects listed in the RTIP*.* Therefore, the No Project Alternative would result in a greater impact than the proposed Project in this regard.

In conclusion, no impacts to land use compatibility and access would occur under the No Project Alternative. However, the No Project Alternative would not be consistent with the ultimate buildout of the City's *General Plan* or planned regional transportation improvement projects listed in the RTIP*.* Therefore, the No Project Alternative would result in a lesser impact related to land use compatibility and access and a greater impact related to consistency with relevant planning policies than the proposed Project.

Aesthetics, Light, and Glare

Under the No Project Alternative Foothill Parkway would not be extended. Significant and unavoidable impacts related to construction, scenic vistas, existing character/quality, and cumulative would not occur since the proposed alignment would not alter the existing conditions on-site. The existing visual character of the Project site would be maintained and no new light sources or glare would be introduced. Therefore, no impacts to aesthetics, light, or glare would occur under the No Project Alternative. As such, the No Project Alternative would result in a lesser impact than the proposed Project in this regard.

Public Health and Safety

Under the No Project Alternative no grading or construction activities would occur; therefore, the potential to encounter known or previously unidentified hazardous materials or waste would be avoided. The No Project Alternative would not create a potential hazard to the public or the environment through foreseeable upset and accidental conditions, or through the use, or disposal of hazardous materials. Therefore, no impacts to public health and safety would occur under the No Project Alternative. As such, the No Project Alternative would result in a lesser impact than the proposed Project in this regard.

Traffic and Circulation

The *Foothill Parkway Westerly Extension Traffic Assessment*, prepared by RBF Consulting, dated June 2008, based on traffic modeling data provided by Meyer, Mohaddes Associates, dated June 2007, includes an assessment of the No Project Alternative for years 2010 and 2025 (refer to Appendix 15.4, TRAFFIC ASSESSMENT). Forecast projections for this Alternative assume improvements to the study roadway segments that are consistent with the City's *General Plan* Circulation Element, with the exception of construction of the westerly extension of Foothill Parkway. Average daily traffic (ADT) volumes for the study roadway segments were identified for forecast years 2010 and 2025 under this Alternative and with Project conditions. The ADT capacity, volume, and Level of Service (LOS) for

forecast years 2010 and 2025 under Project conditions are presented in Section 5.4, TRAFFIC AND CIRCULATION. The ADT capacity, volume, and LOS under the No Project Alternative are presented in Table 7-2, YEARS 2010 AND 2025 NO PROJECT ALTERNATIVE ADT VOLUMES AND LOS, below. Additionally, Figures 5.4-3, YEAR 2010 WITHOUT PROJECT ALTERNATIVE ADT VOLUMES, and 5.4-4, YEAR 2025 WITHOUT PROJECT ALTERNATIVE ADT VOLUMES, provide an illustration of forecast years 2010 and 2025 without Project conditions.

Table 7-2
Years 2010 and 2025 No Project Alternative ADT Volumes and LOS

Study Roadway Segment	Capacity (ADT)	Forecast Year 2010 Volume (ADT)	Forecast Year 2010 V/C – LOS	Forecast Year 2025 Volume (ADT)	Forecast Year 2025 V/C – LOS
6th St west of Smith Ave	53,900[1]	30,100	0.56 – A	44,800	0.83 – D
10th St west of Lincoln Ave	25,900	19,300	0.75 – C	24,200	**0.93 – E**
Green River Rd west of Palisades Dr	53,900[1]	25,100	0.47 – A	46,400	0.86 – D
Serfas Club Dr south of SR-91	35,900	16,500	0.46 – A	30,200	0.84 – D
Paseo Grande north of Foothill Pkwy	13,000	12,200	**0.94 – E**	15,800	**1.22 – F**
Ontario Ave east of Paseo Grande	13,000	12,200	**0.94 – E**	12,200	**0.94 – E**
Ontario Ave east of Lincoln Ave	35,900	20,500	0.57 – A	22,200	0.62 – B
Green River Rd west of Paseo Grande	35,900	13,900	0.39 – A	19,700	0.55 – A
Foothill Pkwy east of Lincoln Ave	25,900	3,800	0.15 – A	5,700	0.22 – A
Upper Dr south of Foothill Pkwy	35,900	6,600	0.18 – A	7,400	0.21 – A
Border Ave north of Foothill Pkwy	13,000	3,000	0.23 – A	3,000	0.23 – A
Mangular Ave north of Foothill Pkwy	13,000	3,800	0.29 – A	3,800	0.29 – A
Lincoln Ave north of Foothill Pkwy	35,900	10,600	0.30 – A	10,800	0.30 – A

Notes:
ADT = Average Daily Traffic
LOS = Level of Service
V/C = Volume to Capacity ratio; deficient roadway segment operation shown in **bold**.

[1] ADT capacity reflects programmed improvements to 6th Street (west of Smith Avenue) and Green River Road (west of Palisades), to be completed in 2010.

Source: Meyer, Mohaddes Associates, June 2007.

As described in Section 5.4.2 EXISTING CONDITIONS, the City's *General Plan* Circulation Element Policy 6.1.6 calls for improvements to maintain LOS D or better on arterial streets wherever possible. At some key locations, such as at heavily traveled freeway interchanges, LOS E may be adopted as the acceptable standard, on a case-by-case basis. Therefore, any roadway expected to operate at LOS E or LOS F is considered deficient, with the exception of roadways operating at LOS E that have been deemed acceptable by the City. Roadway segments are considered to operate over-capacity when the future forecast daily traffic volume exceeds the daily capacity values.

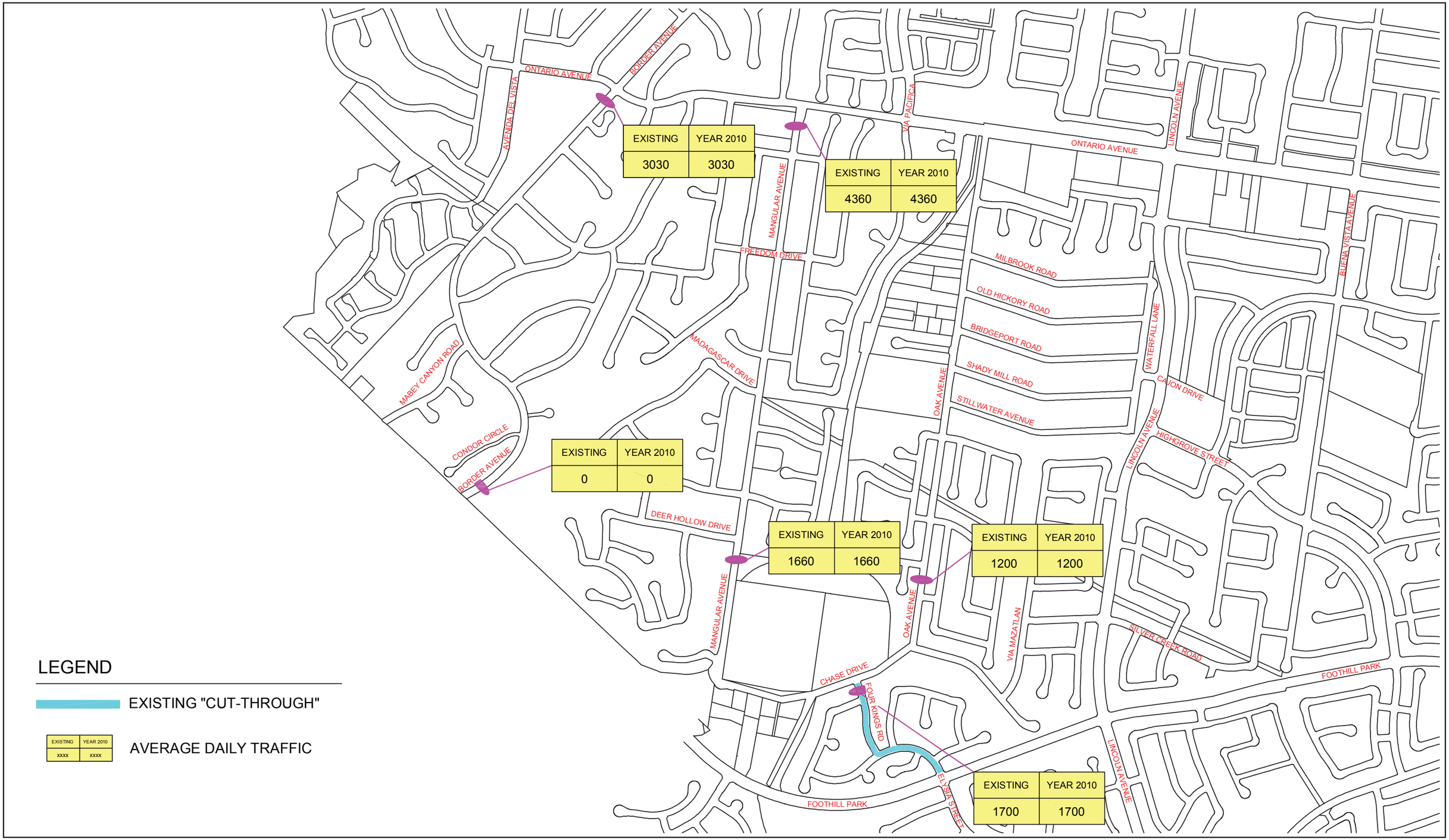
As shown in Table 7-2, the study roadways are forecast to operate acceptably, according to City of Corona performance criteria, for forecast year 2010 No Project conditions, with the exception of the Paseo Grande segment north of Foothill Parkway and Ontario Avenue east of Paseo Grande. Both of these roadways are expected to operate at LOS E, which is considered deficient.

For the forecast year 2025 No Project conditions, the study area roadways are expected to operate acceptably with the exception of 10th Street west of Lincoln Avenue, Paseo Grande north of Foothill Parkway, and Ontario Avenue east of Paseo Grande. Ontario Avenue, east of Paseo Grande, and 10th Street, west of Lincoln Avenue, are expected to operate at LOS E, and the segment of Paseo Grande is expected to operate at LOS F. These roadways will all be considered deficient.

The No Project Alternative yields focused neighborhood study results different from the proposed Project, with no changes in volumes expected on the focused study roadways relative to existing conditions. Without alternative travel routes, existing cut through traffic on Four Kings Road and Elysia Street is expected to remain the same. Figure 7-2, Year 2010 FOCUSED NEIGHBORHOOD TRAFFIC WITH NO PROJECT ALTERNATIVE, shows the focused neighborhood study results for the No Project Alternative.

The current layout of fire station locations within the City was planned based on the City's *General Plan* Circulation Element, which assumes the extension of Foothill Parkway and connections to Border Avenue and Chase Drive will be constructed. The No Project Alternative would not extend Foothill Parkway between Skyline Drive and Paseo Grande. Without the extension of Foothill Parkway and its connections to local roadways, emergency response times will be longer than in the Project condition.

Relative to the proposed Project, in year 2010, a decreased level of service is anticipated on Paseo Grande north of Foothill Parkway from LOS A to LOS E, and on Ontario Avenue east of Paseo Grande from LOS A to LOS E. In year 2025, a decreased level of service relative to the proposed Project is expected on 6th Street west of Smith Avenue from LOS C to LOS D, on 10th Street west of Lincoln Avenue from LOS D to LOS E, on Serfas Club Drive south of SR-91 from LOS C to LOS D, on Paseo Grande north of Foothill Parkway from LOS A to LOS F, on Ontario Avenue east of Paseo Grande from LOS D to LOS E, and on Ontario Avenue east of Lincoln Avenue from LOS A to LOS B. An increased level of service, relative to the proposed Project in year 2025, is expected on Green River Road west of Palisades from LOS E to LOS D, on Green River Road west of Paseo Grande from LOS D to LOS A, and on Foothill Parkway east of Lincoln from LOS D to LOS A.



Source: City of Corona Traffic Engineering Department, 2/20/08.

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Year 2010 Focused Neighborhood Traffic with No Project Alternative

Figure 7-2

Back of 11 x 17 page

In conclusion, in both forecast years 2010 and 2025, the No Project Alternative results in deficient roadways, whereas in the proposed Project condition for both years, all roadways are expected to operate within the City of Corona performance criteria. Additionally, the No Project Alternative results in longer emergency response times. Therefore, the No Project Alternative would result in more significant traffic and circulation impacts than the proposed Project.

Air Quality

Under the No Project Alternative, Foothill Parkway would not be extended. Significant and unavoidable short-term (construction) emission and cumulative construction related impacts associated with the proposed alignment would not occur under the No Project Alternative. Therefore, with particulate (fugitive dust) emissions associated with clearing, grading, or excavation activities, exhaust emissions and potential odors from the construction equipment or vehicles (transporting materials and construction crews) would not occur under the No Project Alternative. With regards to long-term (operational) impacts, the proposed Project would result in less than significant impacts. However, no impact would occur under the No Project Alternative. As such, the No Project Alternative would result in lesser air quality impacts than the proposed Project.

Noise

Under the No Project Alternative, no Project-related construction noise impacts would occur. Significant and unavoidable short-term (traffic) impacts associated with the proposed alignment would not occur under the No Project Alternative. Additionally, no new traffic noise impacts would occur within the Project area; therefore, ambient noise levels would not increase within the immediate vicinity of the Project area. Under the No Project Alternative, most of the sensitive noise receptor locations analyzed would not experience noise levels that exceed the City's standards. Similar to existing conditions, under the No Project Alternative, sensitive noise receptor locations at the west end of the alignment would experience noise levels that exceed the City's standards (refer to Table 5.6-11, YEAR 2025 TRAFFIC NOISE LEVELS IN THE VICINITY OF THE PROJECT, for a complete list of noise levels).

As noted above, for Year 2025, the Project area would experience higher noise levels due to the continued growth in the area. For the No Project Alternative, ten of the sensitive noise receptor locations would experience noise levels that exceed the City's noise standard. However, since these noise levels would be the "No Project" conditions in 2025, impacts would be less than significant in this regard. As such, the No Project Alternative would result in a lesser impact than the proposed Project in this regard.

Biological Resources

In contrast to the development of the Project alignment, under the No Project Alternative there would be no grading, construction activities, or operational uses. Therefore, no direct and indirect impacts to biological resources would occur. As such, the No Project Alternative would result in lesser impacts than the proposed Project in this regard.

Cultural Resources

In contrast to the development of the Project alignment, under the No Project Alternative there would be no potential for impacts to cultural resources associated with grading, excavation, or construction activities. Therefore, impacts to the historic arroyo stone footbridge within the Project impact area would be avoided; as such, the No Project Alternative would not result in significant and unavoidable impacts to historic resources. Additionally, the potential to encounter previously unknown archaeological or paleontological resources would be avoided under this Alternative. Thus, no impact would occur in this regard. As such, the No Project Alternative would result in lesser impacts than the proposed Project in this regard.

Hydrology and Water Quality

In contrast to the development of the Project alignment, under the No Project Alternative there would be no grading, excavation, or construction activities. No short-term (construction) impacts to water quality or long-term (operational) impacts to water quality, hydrologic conditions, or drainage systems would occur under this Alternative since the proposed alignment would not alter the existing conditions on-site. Compared to development of the Project alignment, the No Project Alternative would not include the construction of a storm water conveyance facility in Wardlow Wash, modifications to the Mabey Canyon Debris Basin and Kroonen Canyon, or other stormwater systems and drainage facilities; therefore, no impacts to these hydrologic systems would occur. As such, the No Project Alternative would result in lesser hydrology and water quality related impacts than the proposed Project.

Geologic and Seismic Hazards

In contrast to the development of the Project alignment, under the No Project Alternative there would be no grading, excavation, or construction activities. Impacts related to geologic and seismic hazards would not occur under this Alternative since the proposed alignment would not alter the existing conditions on-site. As such, significant and unavoidable fault rupture impacts would not occur under the No Project Alternative. Therefore, the No Project Alternative would result in lesser impacts than the proposed Project in this regard.

ABILITY TO MEET PROJECT OBJECTIVES

Relative to the proposed Project, the No Project Alternative results in reduced impacts to land use compatibility and access; aesthetics, light, and glare; public health and safety; air quality; noise; biological resources; cultural resources; hydrology and water quality; and geologic and seismic hazards. However, these impacts can be mitigated to a level of less than significant for the proposed alignment, with the exception of aesthetic, light, and glare; short-term air quality impacts; short-term noise; cultural resources; and geologic and seismic hazards. The No Project Alternative would result in greater impacts to consistency with relevant planning and traffic and circulation.

The No Project Alternative does not meet most of the Project objectives. The No Project Alternative does attain Objective 6 at the same level as the proposed Project, because there will be no impact to the Cleveland National Forest. The No Project Alternative would not attain Objectives 1, 2, 3, 4, 5, and 7, which would minimize congestion on local circulation networks, accommodate planned circulation, provide a roadway design, and provide enhanced public services access. The No Project Alternative was rejected because it would not attain most of the Project objectives.

7.3.2 "NO BORDER AVENUE OR CHASE DRIVE/MANGULAR AVENUE CONNECTION" ALTERNATIVE

DESCRIPTION OF ALTERNATIVE

The "No Border Avenue or Chase Drive/Mangular Avenue Connection" Alternative would construct the westerly extension of Foothill Parkway; however, the proposed roadway would not connect to Border Avenue or Chase Drive/Mangular Avenue. The following discussion evaluates the potential environmental impacts associated with the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative as compared to impacts from the proposed Project alignment.

IMPACT COMPARISON TO THE PROPOSED PROJECT

Specific short-term construction impacts and long-term operational impacts are discussed below for each section included in this EIR.

Land Use and Planning

Implementation of the proposed alignment, as well as the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative, may result in land use compatibility and access impacts to surrounding uses. Although the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would alter current conditions along the alignment, implementation of design features such as the location of the proposed alignment area, balancing earthwork, providing wildlife linkages, landscaping and multi-purpose trails would serve to minimize impacts to adjacent uses. As with the proposed Project, potential land use compatibility and access impacts would be mitigated to less than significant levels with implementation of the recommended Mitigation Measures 5.4-1a, 5.4-1b, and 5.4-4 in Section 5.4, TRAFFIC AND CIRCULATION; Mitigation Measures 5.5-1a through 5.5-1d in Section 5.5, AIR QUALITY; and Mitigation Measures 5.6-1a through 5.6-2 in Section 5.6, NOISE. Therefore, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in the same impact related land use compatibility and access as the proposed Project.

The westerly extension of Foothill Parkway is identified within the *City of Corona General Plan* as being required to help alleviate congestion on the east/west routes within the City. The proposed westerly extension of Foothill Parkway is consistent with the *City of Corona General Plan* Circulation Element, RCCGP, CFP, RTIP, RTP, and RCPG. Since these planning documents are not at the level of specificity that would reflect final design, such as including the connection at Border Avenue or Chase Drive/Mangular Avenue, the No Border Avenue or Chase Drive/Mangular

Avenue Connection Alternative would still be considered consistent with the City's *General Plan* and regional plans identified above. Therefore, as with the proposed Project, impacts are considered less than significant in this regard under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative. As such, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in the same impact related to relevant planning policies as the proposed Project.

In conclusion, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in less than significant impacts related to land use compatibility and access, and consistency with relevant planning. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in the same impact as the proposed Project in this regard.

Aesthetics, Light, and Glare

Similar to the proposed Project, construction of the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would include the extension of Foothill Parkway; however, the proposed Border Avenue and Chase Drive connections would not be built. The aesthetic, light, and glare impacts associated with the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative, although slightly reduced, would be similar to that of the proposed Project.

The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in the same short-term (construction) aesthetic impacts associated with grading, excavation, or construction activities as the proposed alignment. As with the proposed alignment, despite implementation of the recommended Mitigation Measure 5.2-1, significant and unavoidable short-term (construction) aesthetic impacts would occur due to exposure of construction activities to surrounding residential areas for a period of approximately two years. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in slightly less short-term visual impacts than the proposed Project. However, construction-related visual impacts would remain significant and unavoidable for the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative.

Similar to implementation of the proposed Project, development of the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would alter westward views to the Santa Ana Mountains. Views to the Santa Ana Mountains are considered a scenic resource within the City of Corona. Although implementation of the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would reduce visible streetscape in the Project area, impacts would be the same as the proposed Project due to the increased streetscape associated with Foothill Parkway. Impacts to scenic vistas would remain significant and unavoidable.

Similar to the proposed Project, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would not impact City or State designated scenic highways. Therefore, no impacts would occur in this regard.

The visual quality at the Project site is defined as primarily rural and suburban. The nature of the area under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative is similar to the suburban landscape to the northwest, north, and east. However, similar to the Project, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would require significant and unavoidable alterations to the existing topography.

Development of the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would replace open space areas at the northern foothills of the Santa Ana Mountains with a developed streetscape, thus changing the visual quality of the site. Additionally, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would require a similar amount of hardscape features (i.e., sound barriers, retaining walls, etc), and impacts in this regard would remain significant and unavoidable. Therefore, similar to the proposed Project, impacts to existing visual character/quality would remain significant and unavoidable.

As with the proposed Project, sources of light under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would include street lighting and vehicular headlights along Foothill Parkway. However, it is unlikely that traffic signals would be installed along Foothill Parkway at Border Avenue and Chase Drive, since the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative does not include connections to these roadways. Although light and glare impacts would be slightly reduced under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative, as with the proposed Project, street lighting and vehicular headlights from travelers on Foothill Parkway would increase light and glare within the area. Compliance with City of Corona's Street Light Standard (Standard Plan 502-0) and recommended Mitigation Measures 5.2-4a and 5.2-4b would be required to reduce long-term light and glare impacts to less than significant levels.

In conclusion, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in slightly reduced impacts to aesthetics, light, and glare due to the reduced developed area. However, although the impacts would be slightly reduced, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in the same significant and unavoidable impacts as the Project. Significant and unavoidable impacts would occur in regards to short-term construction, long-term impacts to scenic vistas, and long-term impacts to existing visual character/quality. Under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative, impacts to light and glare would be reduced as a result of fewer signalized intersections. Impacts pertaining to light and glare would be reduced to less than significant levels with mitigation, similar to the proposed Project.

Public Health and Safety

Due to the similarity of the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative to the proposed Project, the impacts to public health and safety would be the same. As with the proposed alignment, under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative, no regulatory sites associated with hazardous waste/materials were reported and no corrective action, restoration, or remediation has been planned, is currently taking place, or has been completed. The proposed alignment has not been under investigation for violation of

any environmental laws, regulations, or standards; however, the physical site inspection revealed that several potential Recognized Environmental Conditions (RECs) were observed within the immediate vicinity of the Project alignment. Due to the age of the structures within the proposed alignment (prior to the banned use of asbestos containing materials [ACMs] and lead-based paint [LBPs] in 1978), the potential for these materials to be present in building materials is considered likely. As with the proposed alignment, demolition of structures that date pre-1978 could contain result in potential health hazards. In addition, eight regulatory properties associated with subsurface releases of hazardous materials are reported within one-quarter mile of the alignment. A REC caused by one or more of these sites is considered to be low due to the groundwater flow direction, distance, and/or the status of the identified sites. As with the proposed alignment, implementation of recommended Mitigation Measures 5.3-1a through 5.3-1k would be required to ensure potential impacts related to hazardous materials and wastes would be reduced to less than significant levels under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

As with the proposed Project, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would not create a significant hazard to the public or the environment from routine transport, use, or disposal of hazardous materials due to the intended use, scope, and nature of the proposed undertaking. As with the proposed Project, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would be required to comply with Federal, State, and applicable local regulations to reduce potential impacts to less than significant levels in this regard. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

Project construction activities have the potential to create a significant hazard to the public through foreseeable upset and accidental conditions. As with the proposed alignment, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would be required to comply with Federal, State, and applicable local regulations and implementation of recommended Mitigation Measures 5.3-3a through 5.3-3d to reduce potential impacts to less than significant levels in this regard. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

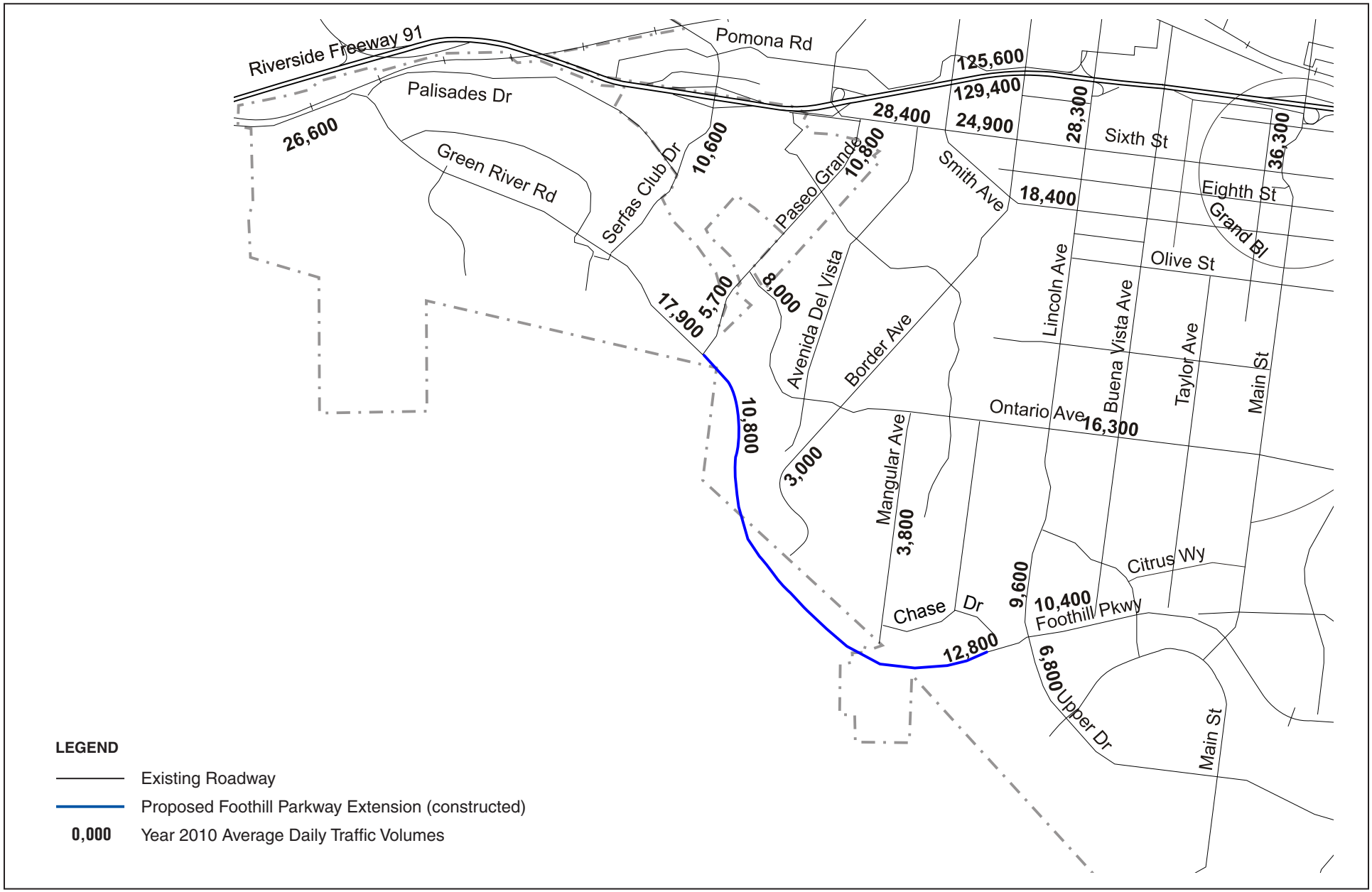
As with the proposed Project, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would not impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. In addition, prior to construction, the Project Contractor shall be required to submit a construction Traffic Management Plan (TMP), which will include restrictions on the hours and routes for construction traffic, as well as construction traffic safety measures. As with the proposed alignment, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would be required to implement Mitigation Measures 5.4-1a and 5.4-1b in Section 5.4, TRAFFIC AND CIRCULATION, to reduce impacts less than significant levels. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

As with the proposed Project, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would not expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. The proposed alignment traverses the boundary of the Cleveland National Forest and is within close proximity to an existing brush fire area. Although the proposed extension of Foothill Parkway in and of itself does not pose a fire risk, the final design would be subject to review by the City of Corona Fire Department to ensure that fire regulations are met, such as ensuring adequate brush clearance of flammable vegetation to prevent the spread of fire, the provision of fire hydrants, and adequate roadway design to provide for the efficient movement of fire equipment. Therefore, less than significant impacts are anticipated in this regard. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

In conclusion, implementation of the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in less than significant impacts to public health and safety. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

Traffic and Circulation

Forecast years 2010 and 2025 under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative assume improvements to the study roadway segments consistent with the City's *General Plan* Circulation Element. Table 7-3, YEAR 2010 AND 2025 NO BORDER AVENUE OR CHASE DRIVE/MANGULAR AVENUE CONNECTION ALTERNATIVE ADT VOLUMES AND LOS, summarizes the 2010 and 2025 ADT capacity, volume, and LOS of the study roadway segments under this Alternative. Figures 7-3, YEAR 2010 NO BORDER AVE. OR CHASE DRIVE/MANGULAR AVE. CONNECTIONS ALTERNATIVE ADT VOLUMES, and 7-4, YEAR 2025 NO BORDER AVE. OR CHASE DR./MANGULAR AVE. CONNECTIONS ALTERNATIVE ADT VOLUMES, show forecast years 2010 and 2025 ADT volumes under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative.



Source: Meyer, Mohaddes Associates, June 2007.

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Year 2010 No Border Ave. or Chase Dr./Mangular Ave. Connections Alternative ADT Volumes

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not to scale

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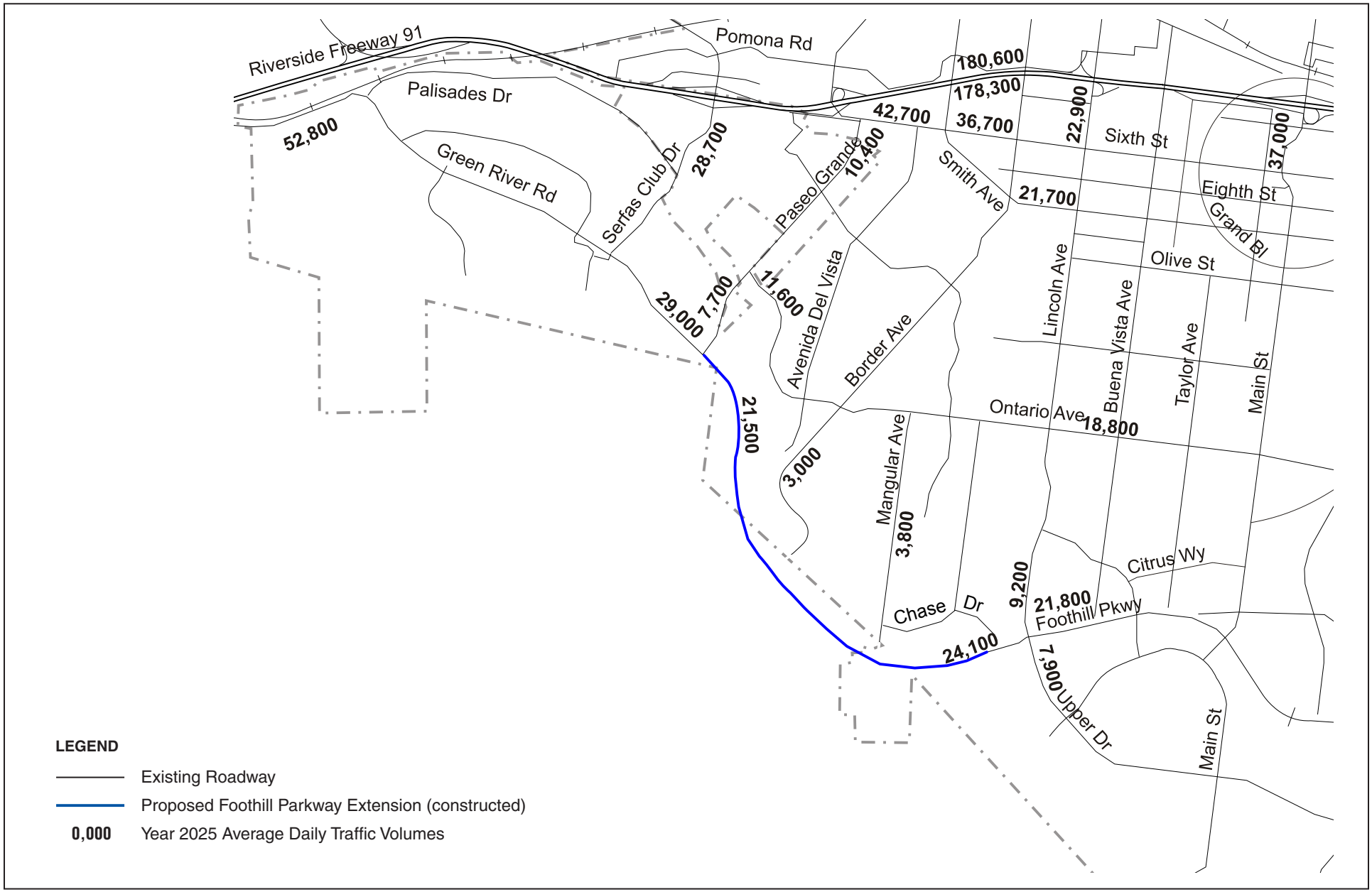
Figure 7-3



Source: Meyer, Mohaddes Associates, June 2007.

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Year 2025 No Border Ave. or Chase Dr./Mangular Ave. Connections Alternative ADT Volumes

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Figure 7-4

Table 7-3
Years 2010 and 2025 No Border Avenue or Chase Drive/ Mangular Avenue Connection Alternative ADT Volumes and LOS

Study Roadway Segment	Capacity (ADT)	2010 Volume (ADT)	2010 V/C – LOS	2025 Volume (ADT)	2025 V/C – LOS
6th St west of Smith Ave	53,900[1]	28,400	0.53 – A	42,700	0.79 – C
10th St west of Lincoln Ave	25,900	18,400	0.71 – C	21,700	0.84 – D
Green River Rd west of Palisades Dr	53,900[1]	26,600	0.49 – A	52,800	**0.98 – E**
Serfas Club Dr south of SR-91	35,900	10,600	0.30 – A	28,700	0.80 – C
Paseo Grande north of Foothill Pkwy	13,000	5,700	0.44 – A	7,700	0.59 – A
Ontario Ave east of Paseo Grande	13,000	8,000	0.62 – B	11,600	0.89 – D
Ontario Ave east of Lincoln Ave	35,900	16,300	0.45 – A	18,800	0.52 – A
Green River Rd west of Paseo Grande	35,900	17,900	0.50 – A	29,000	0.81 – D
Foothill Pkwy east of Paseo Grande	25,900	10,800	0.42 – A	21,500	0.83 – D
Foothill Pkwy east of Lincoln Ave	25,900	10,400	0.40 – A	21,800	0.84 – D
Upper Dr south of Foothill Pkwy	35,900	6,800	0.19 – A	7,900	0.22 – A
Border Ave north of Foothill Pkwy	13,000	3,000	0.23 – A	3,000	0.23 – A
Mangular Ave north of Foothill Pkwy	13,000	3,800	0.29 – A	3,800	0.29 – A
Lincoln Ave north of Foothill Pkwy	35,900	9,600	0.27 – A	9,200	0.26 – A

Notes:
ADT = Average Daily Traffic
LOS = Level of Service
V/C = Volume to Capacity ratio; deficient roadway segment operation shown in **bold**.

[1] ADT capacity reflects programmed improvements to 6th Street (west of Smith Avenue) and Green River Road (west of Palisades), to be completed in 2010.

Source: Meyer, Mohaddes Associates, June 2007.

As shown in Table 7-3, all study roadways are forecast to operate acceptably according to City of Corona performance criteria for forecast year 2010 under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative. In forecast year 2025, all roadways are expected to operate at LOS D or better, with the exception of the segment of Green River Road west of Palisades Drive, which is expected to operate at LOS E. Due to the roadway geometry and close proximity of this segment to State Route 91, this arterial is considered a critical link of the interchange; therefore, the City of Corona has identified LOS E as acceptable for this heavily traveled freeway interchange, consistent with the City's *General Plan* Circulation Element Policy 6.1.6. Therefore, all study roadways are forecast to operate acceptably according to City of Corona performance criteria for forecast years 2010 and 2025 for the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative. None of the roadways analyzed are expected to exceed their capacity for forecast years 2010 and 2025 for the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative.

Compared to the No Project conditions, under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative, the traffic volumes along Green River Road, Upper Drive, and Foothill Parkway increased and traffic volumes along 6th Street, 10th Street, Serfas Club Drive, Paseo Grande, Ontario Avenue, and Lincoln Avenue decreased in year 2010. Similar to the No Project conditions, traffic volumes along Border Avenue and Mangular Avenue would remain unchanged in

year 2010 under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative.

Compared to the No Project conditions for year 2025, the traffic volumes along Foothill Parkway, Green River Road, and Upper Drive increased and traffic volumes along 6th Street, 10th Street, Serfas Club Drive, Paseo Grande, Ontario Avenue, and Lincoln Avenue decreased in year 2025 under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative due to the redistribution of traffic. Similar to the No Project conditions, traffic volumes along Border Avenue and Mangular Avenue would remain unchanged in year 2025 under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative.

Compared to the proposed Project, the traffic volumes along Paseo Grande and Ontario Avenue increased and traffic volumes along Foothill Parkway, Border Avenue, and Mangular Avenue decreased in year 2010 under this Alternative. Traffic volumes along 6th Street, 10th Street, Serfas Club Drive, Green River Road, Upper Drive, and Lincoln Avenue would remain unchanged in year 2010 under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative. Compared to the proposed Project conditions for year 2010, traffic volumes under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would be reduced by approximately 100 vehicles per day along Border Avenue and 200 vehicles per day along Mangular Avenue. This reduction translates to a reduction of three percent along Border Avenue and five percent along Mangular Avenue.

Compared to the proposed Project for year 2025, the traffic volumes along Paseo Grande, Ontario Avenue (east of Paseo Grande), and Lincoln Avenue increased and traffic volumes along Foothill Parkway, Border Avenue, and Mangular Avenue decreased. Traffic volumes along 6th Street, 10th Street, Serfas Club Drive, Green River Road, Upper Drive, Ontario Avenue (east of Lincoln Avenue), would remain unchanged in year 2025 under this Alternative. Compared to the proposed Project conditions for year 2025, under this Alternative traffic volumes would be reduced by 600 vehicles per day along Border Avenue and 700 vehicles per day along Mangular Avenue. This reduction translates to a traffic volume reduction of 17 percent along Border Avenue and 16 percent along Mangular Avenue, however the level of service will be the same. On Ontario Avenue, east of Paseo Grande, this alternative would result in 900 additional vehicles per day, or 8 percent, relative to the proposed Project.

This alternative yields focused neighborhood study results different from the proposed Project, with no changes in volumes expected on the focused study roadways, relative to the existing condition. Without alternative travel routes, existing cut through traffic on Four Kings Road and Elysia Street is expected to remain the same. Relative to the proposed Project, traffic volumes on Border Avenue and Mangular Avenue, near Ontario Avenue, are expected to be higher by 930 vehicles per day and 1,625 vehicles per day, respectively. Figure 7-5, Year 2010 FOCUSED NEIGHBORHOOD TRAFFIC WITH NO CONNECTIONS ALTERNATIVE, shows the focused neighborhood study results for the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative.

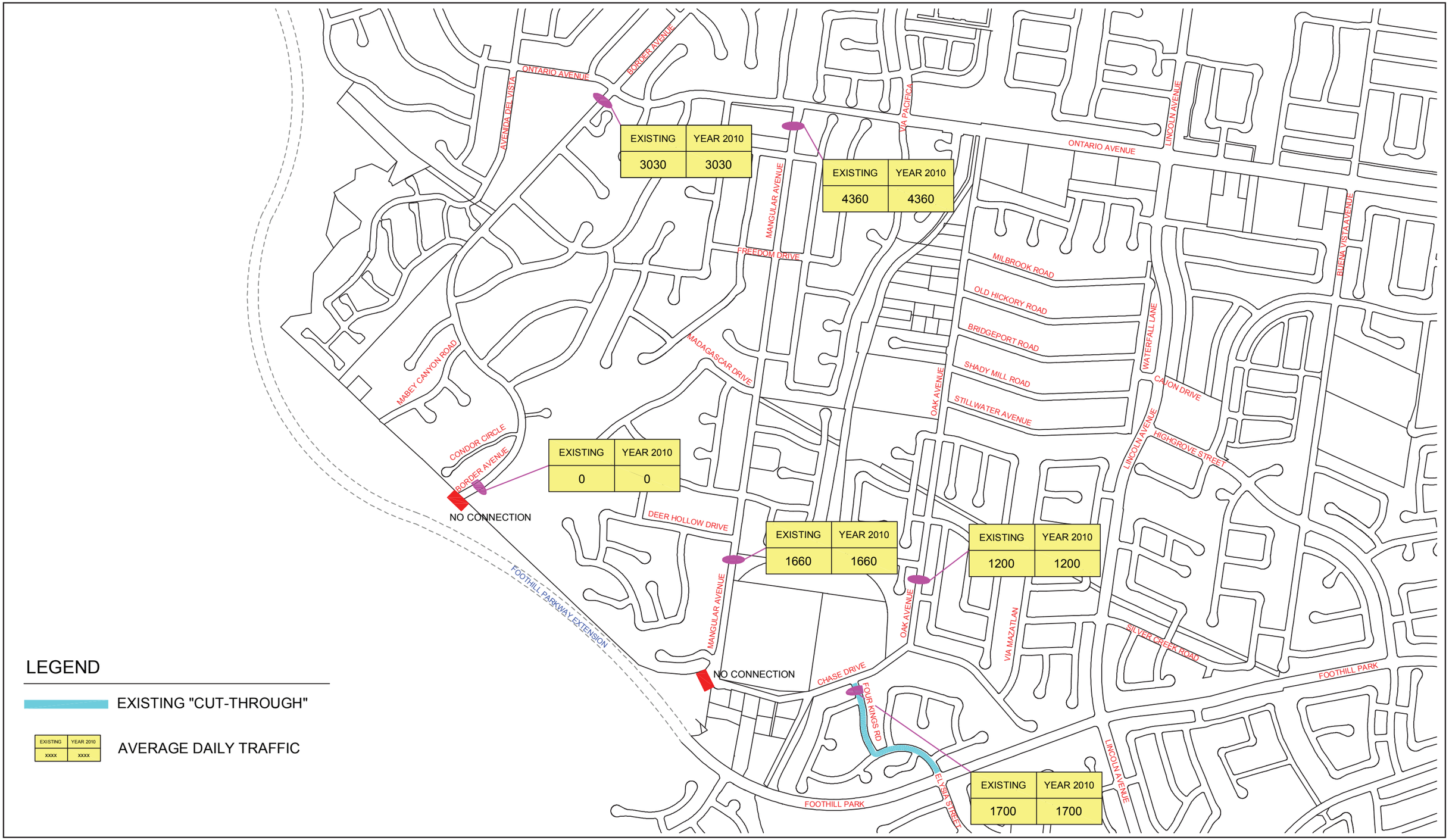
The current layout of fire station locations within the City was planned based on the City's *General Plan* Circulation Element, which assumes that the extension of Foothill Parkway and connections to Border Avenue and Chase Drive will be constructed. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would not connect proposed Foothill Parkway to Border Avenue or Chase Drive. Without the connections, emergency response times to the neighborhoods adjacent to these local roadways will be longer than in the Project condition.

The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative roadway alignment would operate similarly to the proposed Project. However, without the proposed Border Avenue and Chase Drive/Mangular Avenue connections to Foothill Parkway, a difference in the traffic distribution on the local road network would occur under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative, as access to the Project site would be available only from Green River Road and the existing terminus of Foothill Parkway. In the forecast year 2010, a decreased level of service is expected on Ontario Avenue (east of Paseo Grande) from LOS A to LOS B, relative to the proposed Project. However, this decreased LOS is within the City of Corona roadway performance criteria. In year 2025, all of the roadways are expected to operate at the same level of service as the proposed Project, and are within the City of Corona performance criteria.

In conclusion, in both forecast years 2010 and 2025, all of the roadways under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative are expected to operate within the City of Corona performance criteria. Without the proposed connections at Border Avenue and Chase Drive, a decreased level of service is anticipated on Ontario Avenue (east of Paseo Grande) relative to the proposed Project, and emergency response time would be longer than in the proposed Project. However, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in less than significant impacts, similar to the proposed Project.

Air Quality

The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative alignment would not operate as efficiently as the proposed alignment. The two proposed roadway connections, Border Avenue and Chase Drive/Mangular Avenue, which would serve as additional access points to the proposed Foothill Parkway Extension, would not be available. Similar to the development of the proposed Project, significant and unavoidable short-term (construction) emission impacts would occur under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative. Compared to development of the proposed Project, under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative short-term (construction) emission impacts would be slightly reduced as the proposed Border Avenue and Chase Drive/Mangular Avenue connections would not be constructed. Therefore, construction impacts associated with these connections would not occur. Similar to the proposed Project, implementation of Mitigation Measures 5.5-1a through 5.5-1d would reduce short-term (construction) emission impacts; however, given the amount of grading required, impacts would remain significant and unavoidable under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative.



Source: City of Corona Traffic Engineering Department, 2/20/08.

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Year 2010 Focused Neighborhood Traffic with No Connections Alternative

Figure 7-5

Back of 11 x 17 page

With regards to long-term (operational) air quality impacts, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would not improve air quality or traffic/circulation to the same degree as the proposed Project. Less traffic would be redistributed along other roadways within the area, which could potentially increase vehicle queuing and idling times at surrounding roadway intersections. Increased idling and vehicle queuing could result in higher concentrations of CO; however, an exceedance of State or Federal CO standards is not anticipated. As with the proposed alignment, this alternative would result in less than significant long-term (operational) air quality impacts.

In conclusion, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in significant unavoidable short-term (construction) emission impacts and less than significant long-term (operational) air quality impacts. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would have slightly less short-term (construction) emission air quality impacts and greater long-term(operational) impacts than the proposed Project.

Noise

The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative shares the same horizontal and vertical alignment as the proposed Project, with the exception of two roadway connections (i.e. the elimination of the proposed Border Avenue and Chase Drive/Mangular Avenue Connections). Therefore, potential short-term construction and long-term operational (traffic) noise impacts associated with the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would be relatively similar.

Noise generated from construction crews and the transportation of construction equipment and materials to the Project site would result in a temporary increase in ambient noise levels in the Project vicinity. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard. However, as with the proposed Project, operation of construction equipment for the development of the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in substantial (exceeding noise standards) temporary and periodic increases of the ambient noise levels in the Project vicinity above existing conditions due to grading and construction activities. Therefore, short-term construction noise impacts would be significant and unavoidable. As such, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in the same short-term construction noise impacts as the proposed Project.

The *Noise Impact Analysis: Foothill Parkway Westerly Extension*, prepared by LSA Associates, Inc. (LSA), dated January 2008, evaluated long-term operational (traffic) impacts under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative (refer to Table 7-4, YEAR 2025 NO BORDER OR CHASE DRIVE/MANGULAR AVENUE CONNECTION ALTERNATIVE TRAFFIC NOISE LEVELS, for predicted noise levels).

Table 7-4
Year 2025 No Border or Chase Drive/Mangular Avenue Connection Alternative Traffic Noise Levels

Receptor Number	Location	Existing Noise Level[1] (dBA CNEL)	No Project (dBA CNEL)	Proposed Alignment (dBA CNEL)	"No Border or Chase Drive/ Mangular Avenue Connection" Alternative (dBA CNEL)
R-1	San Antonio Drive	**66**[2]	**68**	**66**	**66**
R-2	San Antonio Drive	**66**	**68**	65	65
R-3	San Antonio Drive	**68**	**69**	65	65
R-4	San Rafael Drive	**73**	**74**	**71**	**72**
R-5	San Rafael Drive	**73**	**74**	**71**	**71**
R-6	San Rafael Drive	**73**	**74**	**71**	**71**
R-7	Adobe Avenue	57	58	60	60
R-8	Adobe Avenue	56	57	62	62
R-9	Adobe Avenue	53	55	64	64
R-10	Adobe Avenue	51	52	64	64
R-11	Adobe Avenue	48	49	64	63
R-12	Adobe Avenue	52	53	58	58
R-13	Adobe Avenue	51	53	58	58
R-14	Adobe Avenue	50	52	58	58
R-15	Adobe Avenue	48	50	60	59
R-16	Adobe Avenue	49	50	59	59
R-17	Adobe Avenue	48	49	58	57
R-18	Adobe Avenue	43	45	58	58
R-19	Adobe Avenue	44	46	56	55
R-20	Adobe Avenue	44	46	54	54
R-21	Adobe Avenue	44	45	**53**	**52**
R-22	Avenida Del Vista	48	49	**56**	**56**
R-23	Avenida Del Vista	47	48	**54**	**54**
R-24	Avenida Del Vista	46	47	53	53
R-25	Avenida Del Vista	45	47	52	51
R-26	Avenida Del Vista	42	44	60	60
R-27	Avenida Del Vista	37	38	59	59
R-28	Avenida Del Vista	35	37	58	58
R-29	Avenida Del Vista	36	38	60	60
R-30	Avenida Del Vista	40	42	61	61
R-31	Avenida Del Vista	34	35	58	58
R-32	Avenida Del Vista	35	36	59	59
R-33	Avenida Del Vista	35	36	60	59
R-34	Avenida Del Vista	35	36	59	59
R-35	Avenida Del Vista	37	39	60	60
R-36	Avenida Del Vista	38	40	61	61

Table 7-4 (Continued)
Year 2025 No Border or Chase Drive/Mangular Avenue Connection Alternative Traffic Noise Levels

Receptor Number	Location	Existing Noise Level[1] (dBA CNEL)	No Project (dBA CNEL)	Proposed Alignment (dBA CNEL)	"No Border or Chase Drive/ Mangular Avenue Connection" Alternative (dBA CNEL)
R-37	Chisholm Trail Circle	37	39	63	62
R-38	Chisholm Trail Circle	38	39	62	62
R-39	Chisholm Trail Circle	38	39	60	59
R-40	Chisholm Trail Circle	37	39	**57**	**57**
R-41	Chisholm Trail Circle	38	39	**57**	**56**
R-42	Chisholm Trail Circle	37	38	57	57
R-43	Vixen Trail Circle	38	39	61	61
R-44	Vixen Trail Circle	38	39	59	58
R-45	Vixen Trail Circle	38	39	57	57
R-46	Vixen Trail Circle	38	39	56	56
R-47	Vixen Trail Circle	37	38	57	57
R-48	Raven Circle	36	36	56	56
R-49	Raven Circle	36	37	55	55
R-50	Raven Circle	38	38	57	57
R-51	Raven Circle	39	39	55	55
R-52	Falcon Circle	37	37	60	60
R-53	Falcon Circle	38	39	59	59
R-54	Falcon Circle	40	40	57	57
R-55	Condor Circle	41	41	63	63
R-56	Condor Circle	42	42	61	60
R-57	Condor Circle	51	52	65	63
R-58	Condor Circle	49	49	61	61
R-59	Condor Circle	48	48	58	58
R-60	Condor Circle	53	53	59	58
R-61	Condor Circle	60	60	63	63
R-62	Condor Circle	57	57	59	59
R-63	Eagle Circle	55	55	57	57
R-64	Cape Drive	46	47	52	51
R-65	Cape Drive	48	48	53	53
R-66	Cape Drive	46	46	53	53
R-67	Cape Drive	45	45	52	52
R-68	Cape Drive	44	44	51	51
R-69	Cape Drive	43	43	51	50
R-70	Bonnyview Circle	43	44	53	52
R-71	Bonnyview Circle	43	43	53	53
R-72	Bonnyview Circle	42	42	54	53

Table 7-4 (Continued)
Year 2025 No Border or Chase Drive/Mangular Avenue Connection Alternative Traffic Noise Levels

Receptor Number	Location	Existing Noise Level[1] (dBA CNEL)	No Project (dBA CNEL)	Proposed Alignment (dBA CNEL)	"No Border or Chase Drive/ Mangular Avenue Connection" Alternative (dBA CNEL)
R-73	Bonnyview Circle	41	42	55	54
R-74	Bonnyview Circle	40	41	55	55
R-75	Clearview Circle	40	41	64	64
R-76	Clearview Circle	40	41	61	61
R-77	Clearview Circle	42	43	60	60
R-78	Clearview Circle	40	40	62	62
R-79	Clearview Circle	41	41	60	59
R-80	Clearview Circle	42	43	**58**	**58**
R-81	Meadowcrest Way	40	41	61	61
R-82	Meadowcrest Way	42	43	61	61
R-83	Meadowcrest Way	45	45	64	59
R-84	Meadowcrest Way	49	49	64	58
R-85	Meadowcrest Way	52	52	62	58
R-86	Meadowcrest Way	45	46	58	57
R-87	Meadowcrest Way	49	49	57	57
R-88	Meadowcrest Way	57	57	59	62
R-89	Mangular Avenue	54	54	57	59
R-90	Mangular Avenue	46	47	61	60
R-91	Mangular Avenue	48	50	63	63
R-92	Chase Drive	46	47	57	56
R-93	Chase Drive	45	46	55	55
R-94	Foothill Parkway	38	40	58	58
R-95	Foothill Parkway	44	45	63	63
R-96	Folson Circle	44	47	56	56
R-97	Folson Circle	46	49	58	58
R-98	Folson Circle	53	55	**67**	**67**
R-99	Folson Circle	52	55	62	62
R-100	Folson Circle	49	52	59	59
R-101	Fanning Circle	55	58	63	63
R-102	Fanning Circle	63	65	**71**	**71**
R-103	Fanning Circle	61	63	**68**	**68**
R-104	Fanning Circle	54	57	62	62
R-105	Corbett Road	50	53	58	58
R-106	Corbett Road	49	51	57	57
R-107	Chase Drive	55	56	64	64
R-108	Skyline Drive	54	56	63	63

Table 7-4 (Continued)
Year 2025 No Border or Chase Drive/Mangular Avenue Connection Alternative Traffic Noise Levels

Receptor Number	Location	Existing Noise Level[1] (dBA CNEL)	No Project (dBA CNEL)	Proposed Alignment (dBA CNEL)	"No Border or Chase Drive/ Mangular Avenue Connection" Alternative (dBA CNEL)
R-109	Amethyst Street	53	54	61	61
R-110	Amethyst Street	48	50	**56**	**56**
R-111	Amethyst Street	47	49	**56**	**56**
R-112	Amethyst Street	46	49	**55**	**55**
R-113	Amethyst Street	50	51	**58**	58
R-114	Amethyst Street	48	50	57	57
R-115	Elysia Street	51	52	59	59
R-116	Elysia Street	51	52	60	60
R-117	Elysia Street	53	54	61	61
R-118	Elysia Street	52	54	61	61
R-119	Bonsai Circle	55	57	63	63
R-120	Bonsai Circle	55	57	64	64
R-121	Bonsai Circle	56	57	64	64
R-122	Duxbury Circle	53	56	62	62
R-123	Duxbury Circle	57	60	65	65
R-124	Duxbury Circle	52	53	60	60
R-125	Duxbury Circle	52	54	61	61
R-126	Duxbury Circle	53	55	62	62
R-127	Duxbury Circle	54	56	63	63
R-128	Greenvale Circle	49	50	57	57
R-129	Greenvale Circle	47	49	55	55
R-130	Langtree Lane	48	50	56	56
R-131	Langtree Lane	48	49	55	55
R-132	Langtree Lane	48	50	55	55
R-133	Langtree Lane	48	49	54	54
R-134	Stoneyberry Lane	48	49	52	52
R-135	Athlone Lane	59	61	**69**	**68**
R-136	Athlone Lane	59	60	**67**	**67**
R-137	Athlone Lane	58	59	**66**	**66**
R-138	Athlone Lane	62	64	**70**	**70**
R-139	Athlone Lane	61	63	**69**	**69**
R-140	Athlone Lane	58	60	**66**	65
R-141	Chase Drive	56	58	65	65
R-142	Chase Drive	61	63	**68**	**68**
R-143	Chase Drive	59	61	65	65
R-144	Brunstane Circle	60	62	65	65

Table 7-4 (Continued)
Year 2025 No Border or Chase Drive/Mangular Avenue Connection Alternative Traffic Noise Levels

Receptor Number	Location	Existing Noise Level[1] (dBA CNEL)	No Project (dBA CNEL)	Proposed Alignment (dBA CNEL)	"No Border or Chase Drive/ Mangular Avenue Connection" Alternative (dBA CNEL)
R-145	Brunstane Circle	64	65	**69**	**69**
R-146	Brunstane Circle	63	64	**68**	**68**
R-147	Brunstane Circle	65	**66**	**68**	**69**
R-148	Brunstane Circle	65	**66**	**66**	**67**
R-149	Brunstane Circle	61	62	64	64
R-150	Brunstane Circle	63	64	64	64

Notes:

dBA = A-weighted decibel scale
CNEL = Community Noise Equivalent Level

* All numbers in bold represent noise levels that exceed the City's exterior noise standards of 65 dBA CNEL.

1 At locations with low vehicular traffic, ambient noise level measurements were used to establish existing noise levels at modeled receptor locations.

2 Due to the reduction in average daily traffic (ADT) along Paseo Grande noise levels at this location would be reduced.

3 Due to the reduction in ADT along Paseo Grande, noise levels at this location would be reduced.

4 Due to the reduction in ADT along Paseo Grande noise levels at this location would be reduced.

Source: *Noise Impact Analysis: Foothill Parkway Westerly Extension*, LSA Associates, Inc., January 2008.

As shown in Table 7-4 above, the following 17 receptor locations, out of 150 modeled receptors, would be exposed to noise levels that exceed the 65 dBA CNEL for Year 2025 under both the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative and the proposed Project:

- **R-1 and R-4 through R-6,** these receptor locations represent existing residences located at San Antonio Drive and San Rafael Drive that have outdoor active use areas exposed to traffic noise on Green River Road and Paseo Grande. These receptors would not experience a Project-related noise increase of 3 dBA or more. Currently, no existing walls reduce noise levels for these residences. Traffic noise levels at these receptor locations are contributed by other roadways in the Project area, such as Green River Road and Paseo Grande, and the Project traffic would not contribute significantly to these receptors. Therefore, no sound barriers were evaluated to mitigate noise impacts to these residences.

- **R-98,** this receptor location represents an existing residence located at Folson Circle that has outdoor active use areas exposed to traffic noise on Foothill Parkway. This receptor location would experience a Project-related noise increase of 3dBA or more. No existing sound barriers were assumed

for this residence. One sound barrier was modeled and recommended as mitigation to reduce noise impacts to this residence.

- **R-102 and R-103,** these receptor locations represent existing residences located at Fanning Circle that have outdoor active use areas exposed to traffic noise along the proposed Foothill Parkway. These receptors would experience a Project-related noise increase of 3 dBA or more. No existing barriers were assumed for these residences. One sound barrier was modeled and recommended as mitigation to reduce noise impacts to these residences.

- **R-135 through R-139, R-142, R-145, and R-146,** these receptor locations represent existing residences located at Athlone Lane, Chase Drive, and Brunstane Circle that have outdoor active use areas exposed to traffic noise on existing Foothill Parkway. These receptors would experience a Project-related noise increase of 3 dBA or more. An existing wall 6 ft in height along the residential property line currently reduces noise levels for these residences. One sound barrier was modeled and recommended as mitigation to reduce noise impacts to these residences.

- **R-147,** this receptor location represents an existing residence located at Brunstane Circle that has outdoor active use areas exposed to traffic noise on the existing Foothill Parkway. Unlike the proposed alignment, this residence would experience a Project-related noise increase of 3 dBA or more under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative. A sound barrier was modeled and recommended as mitigation to reduce noise impacts to this residence under this Alternative.

- **R-148,** this receptor location represents an existing residence located at Brunstane Circle that has outdoor active use areas exposed to traffic noise on the existing Foothill Parkway and Lincoln Avenue. This receptor would not experience a Project-related noise increase of 3 dBA or more. The traffic noise level at this receptor location is contributed by other roadways in the Project area, such as Lincoln Avenue, and the Project traffic would not contribute significantly to this receptor. Therefore, no sound barriers were evaluated to minimize noise impacts to this residence.

As with the proposed Project, the following sound barriers were analyzed and recommended to mitigate impacts to the sensitive receptor locations that would experience a Project-related noise increase of 3 dBA or more and would be exposed to a traffic noise level that exceeds the City's exterior noise standard of 65 dBA CNEL under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative:

- **Sound Barrier 1,** is located along the proposed Foothill Parkway along the residential property line to minimize noise impacts to receptor R-98. A minimum barrier height of 6 feet would reduce traffic noise levels to 65 dBA CNEL or below.

- **Sound Barrier 2,** is located along the proposed Foothill Parkway along the residential property line to minimize noise impacts to receptors R-102 and R-103. A minimum barrier height of 6 feet would reduce traffic noise levels to 65

dBA CNEL or below. It should be noted that a perimeter wall already exists in this current location. Prior to issuance of grading permits, the existing wall's acoustical barrier efficiency shall be tested to ensure it meets the requirements to reduce noise levels below 65 dBA.

- **Sound Barrier 3,** is located along the proposed Foothill Parkway along the residential property line to minimize noise impacts to R-135 through R-139, R-142, and R-145 through R-147. A minimum barrier height of 8 to 10 feet would reduce traffic noise levels to 65 dBA CNEL or below.

No sound barriers were analyzed for sensitive receptors that would not be exposed to a traffic noise level exceeding 65 dBA CNEL or that would experience an increase in Project-related noise levels less than 3 dBA.

Under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative, with the incorporation of recommended Mitigation Measure 5.6-2 (Sound Barriers 1 through 3), long-term operational (traffic) noise impacts would be reduced below the City's noise exterior standards of 65 dBA CNEL. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would require the same mitigation as the proposed Project in order to reduce impacts to less than significant impact in this regard. Long-term operational traffic noise impacts under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative, as mitigated, would be the same as the proposed Project in this regard.

In conclusion, as with the proposed Project, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in significant and unavoidable short-term construction noise impacts and less than significant long-term operational (traffic) impacts. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in the same short-term construction noise impacts and the same long-term operational (traffic) noise impacts, as mitigated, as the Proposed Project.

Biological Resources

Compared to development of the proposed Project, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in similar short-term impacts to biological resources associated with grading, excavation, and construction activities. These impacts could include increased runoff that may affect water quality, increased lighting that would affect the behavior patterns of nocturnal and crepuscular (active at dawn and dusk) wildlife, increased dust accumulation on surrounding vegetation, impacts on nesting birds/raptors, increased fire danger, and spread of exotic species. As with development of the proposed Project, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would be required to implement Mitigation Measure 5.5-1a (i.e. standard dust suppression) in Section 5.5, AIR QUALITY, to reduce construction-related dust generation. Therefore, the indirect effect of impairing respiration of existing plant species on the Project site is considered less than significant. As with development of the proposed Project, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would be required to implement of Mitigation Measures 5.7-1a through 5.7-1c to reduce short-term construction related impacts to biological resources to less than significant. As such, the No Border Avenue or Chase Drive/Mangular

Avenue Connection Alternative would result in the same impacts as the proposed Alternative in this regard.

Vegetation impacts under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would be less than the proposed Project. Native and non-native vegetation impacts associated with the proposed Project are illustrated in Figure 5.7-5 in Section 5.7, VEGETATION IMPACTS. A summary of vegetation impacts under the proposed Project and this Alternative are described in Table 7-5, NO BORDER AVENUE OR CHASE DRIVE/MANGULAR AVENUE CONNECTION ALTERNATIVE VEGETATION IMPACTS.

Table 7-5
No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative Vegetation Impacts

Vegetation Type	Proposed Project (Acres)	"No Border or Chase Drive/ Mangular Avenue Connection" Alternative (Acres)	Difference
Coastal Sage Scrub	**7.25**	**7.02**	**-0.23**
Coastal Sage Scrub/Chaparral	14.02	14.02	0.00
Coastal Sage Scrub/Ruderal	**0.15**	**0.12**	**-0.03**
California Buckwheat-Scalebroom Alluvial Scrub	**2.42**	**2.39**	**-0.03**
Chaparral	22.84	22.84	0.00
Non-native Grassland	1.76	1.76	0.00
Fremont Cottonwood-Willow Riparian Woodland	0.40	0.40	0.00
Willow Riparian Woodland	0.25	0.25	0.00
Western Sycamore-Coast Live Oak Alluvial Scrub	0.97	0.97	0.00
Coast Live Oak Woodland	5.06	5.06	0.00
Mule Fat Scrub	0.78	0.78	0.00
Mule Fat Scrub-Willow Riparian Woodland	0.00	0.00	0.00
Ruderal	4.81	4.81	0.00
Ornamental	**2.20**	**1.22**	**-0.98**
Ornamental/Developed	**1.97**	**0.23**	**-1.74**
Disturbed	**3.96**	**3.07**	**-0.89**
Developed/Ruderal	7.31	7.31	0.00
Developed	3.25	3.25	0.00
Total	**79.40**	**75.50**	**-3.9**

Note: Vegetation types and numbers in **bold** represent vegetation impacts that differ from the proposed Project.
Source: BonTerra Consulting, Amber Oneal, Senior Project Manager/Ecologist, electronic communication, July 17, 2008.

Development of the proposed Project would impact approximately 79.40 acres of native and non-native vegetation types. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would impact 75.50 acres of native and non-native vegetation types.

The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would impact the same vegetation acreage as the proposed Project for 11 vegetation types, as indicated in Table 7-5. Similar to the proposed Project, compliance with relevant measures from the Western Riverside MSHCP and recommended Mitigation Measures 5.7-2a and 5.7-2b would reduce impacts to a less than significant level in this regard. As such, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in fewer impacts than the proposed Project on coastal sage scrub by 0.23 acres, coastal sage scrub/ruderal by 0.03 acres, California buckwheat-scalebroom alluvial scrub by 0.03 acres, ornamental by 0.98 acres, ornamental/development by 1.74 acres, and distributed by 0.89 acres. Coastal sage scrub vegetation is proposed for conservation within the *Riverside County Multiple Species Habitat Conservation Plan* (MSHCP) Criteria Area; however, the Project site is not located within the Criteria Area. Impacts on these vegetation types are considered adverse but mitigated by the City of Corona's participation in the MSHCP. Therefore, as with the proposed Project, this Alternative would result in less than significant impacts in this regard and no mitigation would be required. California buckwheat-scalebroom alluvial scrub is classified as riparian vegetation. Impacts on riparian vegetation would be considered significant. Although the removal of riparian habitat is considered a significant impact, recommended Mitigation Measures 5.7-2a and 5.7-2b would be considered biologically equivalent or superior. Mitigation Measure 5.7-2a requires restoration of riparian habitat at no less than a 2:1 ratio to ensure no net loss of riparian habitat. Mitigation Measures 5.7-2a and 5.7-2b require replacement of native trees within the riparian habitat at the following ratios: coast live oaks 4:1; sycamore 3:1; cottonwood 3:1; willow 2:1; and scrub oak 2:1. As with the proposed Project, this Alternative would be required to implement Mitigation Measures 5.7-2a and 5.7-2b to reduce impacts to less than significant in this regard. As this Alternative would result in fewer impacts than the proposed alignment to California buckwheat-scalebroom alluvial scrub, less mitigation would be required under this Alternative. Ornamental, ornamental/development, and distributed vegetation generally have low biological value because they are composed of unvegetated areas or are vegetated with non-native species. These areas generally provide limited habitat for native plant and wildlife species, although they may occasionally be used by native species. Therefore, impacts on ornamental, ornamental/development, and distributed vegetation would not be considered significant. Therefore, as with the proposed Project, this Alternative would result in less than significant impacts in this regard and no mitigation would be required.

Impacts on local travel routes under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would be similar to the proposed Project. As with the proposed Project, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would remove local travel routes within the direct impact area. However, few native habitat areas would be located northeast of the Project site. Therefore, this Alternative would not be expected to substantially impact wildlife movement along local travel routes. In addition, there are several local travel routes remaining to the southwest of the Project site. As with the proposed Project, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in less than significant impacts on local wildlife movement and no mitigation

would be required. As such, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

Impacts on regional wildlife movement under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would be similar to the proposed Project. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would adversely affect regional wildlife movement along a segment of Wardlow Wash. Fresno Canyon, located 1.5 miles west of the Project site, was identified for preservation by the MSHCP to maintain the linkage between the Cleveland National Forest and the Santa Ana River/Prado Basin while Wardlow Wash has not been identified for long-term preservation. Thus, although Wardlow Wash functions as a regional wildlife corridor between the Cleveland National Forest and the Santa Ana River/Prado Basin and impacts on wildlife movement along Wardlow Wash are considered significant, the impact is considered mitigated by the City of Corona's participation in the MSHCP. Therefore, as with the proposed Project, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in less than significant impacts in this regard and no mitigation would be required. However, it is recommended that the base of the manufactured slope of the road be vegetated with native species to retain potential for some wildlife movement in Wardlow Wash (refer to Mitigation Measure 5.7-4). In addition, it is recommended that the culvert conveying water from Wardlow Wash under Paseo Grande remain large enough to allow for continued movement of wildlife species. The existing 8-foot culvert is sufficient for movement of medium-sized wildlife. Recreational trails, access roads, and wildlife movement have been considered in the design of two multi-purpose trails as part of the proposed alignment and this Alternative would also incorporate the proposed trails.

No special status plant species are located within the proposed Border Avenue and Chase Drive/Mangular Avenue connections and all on-site special status plants are located along the Foothill Parkway. As such, impacts to special status plants would be the same under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative as the proposed Project. As the proposed Project, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would be required to implement Mitigation Measure 5.7-5 to reduce impacts on intermediate mariposa lily and Coulter's matilija poppy to less than significant levels.

Suitable habitat is present on the Project site for the least Bell's vireo, a species listed in Section 6.1.2 of the MSHCP as a species that requires additional surveys if suitable habitat is present. This species was not observed during the 2000 or 2006 focused surveys. The least Bell's vireo was observed on only one visit and was therefore considered a migrant using the Project site for dispersal. Although, the Project site was not occupied for breeding in 2008, the Project site does contain potentially suitable breeding habitat that could be occupied in the future. Any impact on this species would be considered significant. As with the proposed Project, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in less than significant impacts to the least Bell's vireo with implementation of Mitigation Measure 5.7-6a. As such, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

Although suitable habitat is present on the Project site, burrowing owl was determined to be absent from the Project site at this time because it was not detected during the 2006 or 2008 focused surveys. However, suitable habitat is present on the Project site and the Project site is located within the additional survey area for this species; therefore, burrowing owl may move into the Project site prior to the start of construction. Any impact on an active burrowing owl burrow would be considered a significant impact. Per MSHCP requirements, a pre-construction survey for burrowing owl would be required to confirm absence of this species from the Project impact area prior to the start of construction. As with the proposed Project, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in less than significant impacts to the burrowing owl with implementation of Mitigation Measure 5.7-6b. As such, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

As with the proposed Project, this Alternative would be required to implement Mitigation Measures 5.7-7a through 5.7-7e to reduce urban/wildland interface impacts related to the drainage, night lighting, noise, invasive species, and barriers to less than significant levels. As such, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

In conclusion, as with the proposed Project, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in less than significant impacts related to biological resources. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in relatively the same biological resource impacts as the proposed Project; however, this Alternative would result in fewer vegetation impacts. Additionally, this Alternative would require less mitigation than the proposed Project.

Cultural Resources

The *Cultural Resources Assessment for the Foothill Parkway Westerly Extension Project, City of Corona, Riverside County, California*, (*Cultural Resources Assessment*) prepared by BonTerra Consulting, dated June 5, 2006 indicated that no archaeological resources or paleontological resources were identified within the cultural resources survey area. Potential cultural resource impacts under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would be similar to that of the Project alignment; however, the two proposed roadway connections (i.e. Border Avenue and Chase Drive/Mangular Avenue) would not be built under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative. Since the proposed roadway connections would not occur under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative, any cultural resources potentially located in this area would not be impacted. As with the proposed Project, with implementation of Mitigation Measures 5.8-2a through 5.8-3b, impacts on undiscovered archaeological resources and paleontological resources would be reduced to less than significant levels under this Alternative.

Addendums to the *Cultural Resources Assessment* have been prepared by SWCA, dated January 24, February 15, February 21, and April 28, 2008. The *Addendum*, dated January 24, 2008, identifies two built-environment resources of unknown ages

outside the original *Cultural Resources Assessment* survey area. One of these resources, a rock wall feature with associated brickwork, is located outside the Project area, but within the 100 foot buffer area. The other resource, a small arroyo stone footbridge, is located within the impact area under this Alternative. Neither of these resources had formally been recorded and their historical significance was unknown. The *Addendum*, dated February 15, 2008, included the recordation of the Project site on State of California Department of Parks and Recreation (DPR) Series 523 Forms, an archival research at the Corona Public Library, and a formal evaluation of the Project site based on the significance criteria of the California Register of Historical Resources (California Register). The *Addendums* indicate that the Project site is a former residential citrus ranch and private airport, called Sky Ranch. The property was altered by the construction of the Mabey Canyon Debris Basin (1974) and sometime after 1984, the main residence and outbuildings were destroyed by fire. Remaining features include the small arroyo stone footbridge over a creek, masonry outlines or foundations of the former main residence, portions of a cistern or swimming pool, a concrete gutter, numerous complete and incomplete rock walls, retaining walls and steps, a large (4 by 6 feet), open, riveted metal cylinder and paved roads (including an aviation landing strip). As indicated in the *Addendums*, other than the arroyo stone footbridge no other remaining features retain requisite integrity to be considered eligible for the California Register. The arroyo stone footbridge is a "historical resource" under CEQA and demolition of the footbridge would constitute material impairment under CEQA. As with the proposed the proposed Project, Mitigation Measures 5.8-1a through 5.8-1c would be required to lessen impacts to the historic resource. However, impacts to the historic arroyo stone footbridge would remain significant and unavoidable. As such, both the proposed Project and the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in significant and unavoidable impacts in this regard.

In conclusion, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in less than significant impacts related to archaeological resources and paleontological resources, and significant and unavoidable impacts related to historic resources. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

Hydrology and Water Quality

Compared to development of the proposed Project, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in the same short-term (construction) impacts to water quality associated with grading, excavation, or construction activities. Therefore, any water quality impacts resulting from roadway runoff would be relatively the same. Implementation of the same mitigation measures would reduce construction-related impacts to a less than significant level.

As with the proposed Project, operation of the proposed alignment would not violate water quality standards or waste discharge requirements. As with the proposed alignment, this Alternative would primarily utilize a variety of structural and non-structural post-construction BMPs to reduce long-term water quality impacts to the Santa Ana River as well as the multiple groundwater basins that serve the area. Similar to the proposed alignment, the No Border Avenue or Chase Drive/Mangular

Avenue Connection Alternative would be required to incorporate post construction Mitigation Measure 5.9-2 for post construction BMPs to reduce long-term water quality impacts to less than significant levels. As such, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

With regards to groundwater impacts, similar impacts would result from development of the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative compared to development of the proposed Project. Due to the scope and nature of the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative, the construction of the proposed Foothill Parkway extension as a four-lane roadway, impacts to groundwater supplies or groundwater recharge are not anticipated. As with the proposed Project, development of the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would not create a substantial demand on water supplies. Additional entitlements or resources regarding groundwater supplies would not be required. Similar to the proposed Project, any water for irrigation purposes would be negligible since landscaping would include native drought tolerant species, consistent with City-approved landscaping themes, and the City would require the Project to use reclaimed water for irrigation. Therefore, the proposed alignment would not deplete groundwater supplies. As such, impacts would be less than significant in this regard and no mitigation would be required. As with the proposed Project, development of the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would not alter the direction or rate of flow, or substantially deplete the quantity of groundwater resources, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations. The Project site is located within the Santa Ana Watershed, which encompasses 153.2 square miles. According to the *Water Quality Assessment*, as compared to the size of the watershed, the size of the Project area is insignificant (less than one percent). While the Project would create new impervious area, the impact it generates would be inconsequential when compared to the total watershed area. Existing culverts and control structures that divert and regulate water to the City of Corona Department of Water & Power's recharge ponds would be lengthened and/or relocated if determined necessary during development of final design plans. As with the proposed Project, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in a less than significant impacts related to groundwater recharge, and no mitigation would be required. Therefore, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

As with the proposed Project, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site. Implementation of the proposed Project is considered a relatively small linear Project within a large watershed, with an increase in impervious area of less than one percent. As indicated in Section 5.9, HYDROLOGY AND WATER QUALITY, the proposed Project would increase the impervious area by approximately 21.6 acres; however, the overall impact of this Project on the Santa Ana Watershed is insignificant. Because of the similarity of the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative to the proposed Project, the impacts to the Santa Ana Watershed would be essentially the same. Compared to

development of the proposed Project, less impervious area would result under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative because the two proposed connections would not be constructed. However, due to the scope of the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative, in comparison to the size of the Santa Ana Watershed, this reduction in the amount of impervious surface would be insignificant. Furthermore, storm water runoff from the site would drain into concrete lined engineered flood control channels, which controls the discharge from the site and prevents erosion. Additionally, landscaping along the hillside and slope areas would help to prevent erosion. Culverts, channels, and main line storm drains for both on-site and off-site drainage facilities would be designed to accommodate peak flow rates and debris loads; thereby preventing increased flows that would exceed the capacity of downstream drainage systems. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would not cause a hydrologic condition of concern, since runoff from the Project site drains to engineered channel facilities. The increase in runoff volume caused by the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative is insignificant and would not significantly alter the existing drainage pattern of the area resulting in substantial erosion or siltation on-site or in the project vicinity. As with the proposed Project, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in less than significant impacts in this regard and no mitigation would be required.

As with the proposed Project, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. As noted above, the increase in runoff volume caused by the proposed Project is insignificant. Storm drainage improvements would be designed to accommodate existing and anticipated future runoff volumes and flow rate. Additionally, detention basins, culverts, channels, main line storm drains, and other runoff conveyance facilities associated with the proposed alignment would have a design capacity adequate to operate under projected runoff and debris loads. As with the proposed Project, storm drain improvements associated with the No Border Avenue or Chase Drive/Mangular Avenue Connection Alterative would reduce potential flooding impacts related to stormwater runoff to less than significant level and no mitigation would be required. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

As with the proposed Project, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. As part the *Hydrology Study* prepared for the proposed Project, sediment calculations were performed for the undeveloped areas tributary (Watersheds A, B and D through F) to the Project site using the Los Angeles District Debris Method. The *Water Quality Assessment* has determined that no resulting increase in peak discharge to the downstream channels is expected. Proposed culverts, channels, and main line storm drains associated with the proposed alignment for both on-site and off-site drainage facilities would be designed to accommodate peak flow rates and debris loads under this Alternative. These facilities will be analyzed in more detail during the final design process, as

part of a subsequent Hydraulic Report. Recommendations in the report would be incorporated into the Project roadway design. With implementation of the recommended Mitigation Measure 5.9-6, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would be designed to result in less than significant impacts related to the drainage system capacity. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

As with the proposed Project, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would not be subject to inundation by seiche, tsunami, or mudflow. The potential for tsunamis and seiches impacting the proposed roadway alignment is not considered a risk due to the Project site's distance from the Pacific Ocean and the absence of lakes or large bodies of water in the immediate area. According to the City's *General Plan*, the primary inundation threat to the City of Corona is from Lake Mathews, which impounds 182,000 acre-feet. Lake Matthews is approximately seven miles southeast of Corona and approximately 13 miles east of the Project site. Failure of either dam would cause flooding along the Temescal Wash in the eastern and northeastern portions of the City.[1] As such, Lake Matthews does not pose a significant flood risk to the Project site. The flow pattern from Prado Dam is westward away from Corona; therefore, Prado Basin and Dam do not pose a significant flood risk to the Project site. The Foothill Parkway extension would cross over the Mabey Canyon Debris Basin. The basin is used for flood control and typically does not retain water year round. The roadway would not result in the redirection of flood flows in a manner that would subsequently lead to the loss of adequate flood conveyance in the City. As with the proposed Project, development under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would be subject to the provisions of Title 18 (Flood Plain Management) of the City's *Municipal Code*. The City's *General Plan* includes policies that minimize the potential for flooding to impact property and human life. Additionally, compliance with the City's *Master Drainage Plan* would also reduce the dangers associated with flooding during storm events. As with the proposed Project, this Alternative would also be required to obtain approval of Mabey Canyon Debris Basin modifications, Kroonen Canyon Channel modifications, and regional storm drain facilities from the Riverside County Flood Control and Water Conservation District. The policies identified in the *General Plan* would minimize the effects of flooding hazards. Similar to the proposed Project, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alterative would result in less than significant impacts related to inundation and no mitigation would be required. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

In conclusion, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in less than significant impacts related to hydrology and water quality. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in relatively the same impacts as the proposed Project in this regard.

[1] *City of Corona General Plan*, EIP Associates, March 17, 2004.

Geologic and Seismic Hazards

Compared to development of the proposed Project, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in similar soil impacts associated with grading, excavation, or construction activities. Compared with the construction of the proposed alignment, under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative, geotechnical constraints would be similar because the soil types within the Project site are the same. Grading activities have the potential to result in the exposure of soils to short-term erosion by wind and water. In order to mitigate the potential effects of erosion on-site, temporary and permanent erosion control measures would be required, such as the use of sandbags, hydroseeding, landscaping, and/or soil stabilizers. The Project Contractor would be required to submit a Storm Water Pollution Prevention Plan (SWPPP), which includes erosion control measures in order to comply with the National Pollution Discharge Elimination System (NPDES) requirements of the Federal Clean Water Act (CWA). Implementation of appropriate grading measures and a Storm Water Pollution Control Plan would reduce the potential impacts to less than significant levels. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in the same impact as the proposed Project in this regard.

Implementation of the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative has the potential to expose commuters to adverse effects associated with rupture of a known earthquake fault. The proposed Foothill Parkway alignment is located in a seismically active region. Active faults that are part of the Whittier-Elsinore and Chino Fault Zones traverse the Project site. The City's *General Plan* provides goals and policies for the potential geotechnical hazards within the City of Corona (refer to the City's *General Plan* Policies 11.1.2 and 11.1.5 identified above). The goals and policies were established to ensure that development satisfactorily addresses the proper siting, design, and construction of "essential facilities", including their continued functioning in the event of a seismic or other geologic disaster. As with development of the proposed alignment, development under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would be required to comply with the UBC, State, County, and City regulations related to seismic hazards. Follow-up field studies during PS&E would confirm that the Project design meets these seismic safety standards, or would recommend engineering techniques to ensure compliance with the most current engineering standards for seismic design. However, this Alternative would not be consistent with the City's *General Plan* Policy 11.1.2. As with the proposed alignment, development of this Alternative with adequate setbacks to avoid fault rupture impacts may not be possible since active faults traverse the Project site. Although this Alternative would be required to implement Mitigation Measure 5.10-2 to reduce fault rupture impacts, significant and unavoidable impacts would occur in this regard. Therefore, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in the same impact as the proposed Project in this regard.

As noted above, ground shaking on the Project site and vicinity is likely to occur. Local commuters may be exposed to seismic ground shaking if it occurs during the short period of time that they drive on the proposed Foothill Parkway roadway. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would

be designed and constructed to withstand the magnitude of an earthquake at the surrounding faults. Based on predicted maximum peak ground accelerations at the site and given the soil types identified on-site, ground failure could occur at the Project site. As with development of the proposed Project, development under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would be required to comply with the UBC, State, County, and City regulations related to seismic ground shaking. Follow-up field studies during PS&E would confirm that the Project design meets these seismic safety standards, or would recommend engineering techniques to ensure compliance with regulations. Compliance with the UBC, State, County and City regulations related to seismic ground shaking would reduce this potential impact to less than significant levels. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in the same impact as the proposed Project in this regard.

With regards to liquefaction impacts, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would have similar impacts as the proposed Project because the design would traverse the same soil types, which are susceptible to liquefaction. As with development of the proposed Project, development of the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would traverse a number of large, alluvial-filled canyons including the Wardlow, Mabey, and Hagador Canyons. Additionally, young and old alluvial fan deposits underlie the south portion of the alignment as it enters the Corona Plain. Since alluvial sediments commonly have an unconsolidated nature and can experience shallow groundwater conditions, the potential for liquefaction is possible within these areas. However, implementation of the proposed alignment would be in conformance with established construction and design parameters set forth in the UBC. The proposed Project is required to comply with the UBC, State, County, and City regulations related to liquefaction. Follow-up field studies during PS&E would confirm that the Project design meets these seismic safety standards, or would recommend engineering techniques to ensure compliance with regulations. Compliance with the UBC, State, County and City regulations related to liquefaction would reduce this potential impact to less than significant levels. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in the same impact as the proposed Project in this regard.

With regards to potential landslide impacts, neither the proposed Project nor the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative is anticipated to result significant impacts. No existing landslides have been mapped along the proposed alignment area; as such, no landslides would be located within the Project area under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative. However, the potential exists for heavily sheared and fractured material movement due to the proximity of the alignment to the Whittier-Elsinore Fault Zone. As with the proposed Project, if left untreated, areas of weak materials would have the potential to be subject to movement triggered by strong seismic shaking and, therefore, adverse conditions could occur. However, during the design phase of the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative, areas that are found to contain weak materials would be investigated and thus, remedial grading options would be developed to stabilize materials that are susceptible to seismic landslide movement. Therefore, the potential for seismically induced landslides is less than significant. As such, both the proposed alignment and

the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in less than significant impacts related to landslides.

Because the soil types included in the Project area under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative are the same as soil types as documented for the proposed Project, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would have similar impacts with regards to soil expansion and slope stability. There are no known ongoing or planned large-scale extractions of groundwater, gas, oil, or geothermal energy that would cause subsidence in the Project area. Therefore, there is no known hazard related to land subsidence along the proposed Project or associated with the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative.

Construction under both the proposed Project and the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would include man-made fill, trench-walls, and cut and fill slopes. Bedrock underlies the proposed Project and is considered only slightly compressible; therefore, it is expected to adequately support embankment fills and roadway loads. Man-made fill and alluvium along the alignment are typically compressible and may be collapsible; as a result, these materials may not be suitable for the support of fills and structural loads as they currently exist. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would require the same man-made fill, trench-walls, and relatively the same amount of cut and fill slopes as the proposed alignment. During the final design phase and the construction of the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative, soils with the potential to collapse or expand would be identified, evaluated, and mitigated. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would be required to implement the same mitigation measures as the proposed Project, to reduce impacts related to expansive soils to a less than significant level. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in the same impact as the proposed Project in this regard.

All cut and fill slopes under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would incorporate standard practices of the UBC during the design phase and construction to identify any unstable conditions. If unstable conditions are found on-site, the Project Contractor would suggest recommendations for the final design phase of the alignment. In addition, the Project Contractor would suggest recommendations regarding trench-wall stability, which would be provided during the design phase. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would be required to implement the same mitigation measures as the proposed Project, to reduce impacts associated with unstable slopes and trench-wall stability to a less than significant level. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in the same impact as the proposed Project in this regard.

In conclusion, the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in less than significant impacts related to soil erosion, ground shaking, liquefaction, landslides, and expansive soils/soil stability. However, this Alternative would result in significant and unavoidable impacts related to fault rupture. The No Border Avenue or Chase Drive/Mangular Avenue Connection

Alternative would result in relatively the same impacts as the proposed Project related to geologic and seismic hazards.

ABILITY TO MEET PROJECT OBJECTIVES

The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in lesser impacts related to aesthetics, light, and glare; short-term air quality; and biological resources than the proposed Project. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would result in relatively the same impacts related to land use compatibility and access; consistency with relevant planning; public health and safety; traffic and circulation; noise; cultural resources; hydrology and water quality; and geologic and seismic hazards as the proposed Project. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative results in greater impacts related to long-term air quality than the proposed Project. However, as with the proposed Project, impacts can be mitigated to a level of less than significant under the No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative, with the exception of aesthetic; short-term air quality; short-term noise; cultural resource; and geologic and seismic hazards impacts.

The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would attain Objectives 1, 3, 5, and 7 at a lesser level than the proposed Project. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative would attain Objectives 2, 4, and 6 at the same level as the proposed Project. The No Border Avenue or Chase Drive/Mangular Avenue Connection Alternative was rejected because it failed to meet the Project objectives to the same degree as the proposed Project. Additionally, this Alternative was rejected because it failed to avoid significant and unavoidable impacts and would not be a benefit in terms of reduced significant environmental impacts. As such, the "No Border Avenue or Chase Drive/Mangular Avenue Connection" Alternative would result in the same significant and unavoidable impacts as the proposed Project.

7.3.3 "WITH CHASE DRIVE/MANGULAR AVENUE CONNECTION" ALTERNATIVE

DESCRIPTION OF ALTERNATIVE

The "With Chase Drive/Mangular Avenue Connection" Alternative would result in the construction of the Foothill Parkway Westerly Extension along the same alignment as described for the proposed Project and only the proposed roadway connection to Chase Drive/Mangular Avenue would be constructed. The proposed connection to Border Avenue would not be constructed.

The existing Chase Drive is designated as a two-lane collector roadway in the *City of Corona General Plan* Circulation Element. The existing Chase Drive would be extended westerly approximately 650 feet from Mangular Avenue as a two lane undivided collector and form a "T" intersection with Foothill Parkway. The proposed typical section includes a 12-foot traffic lane and 6-foot wide Class III Bike Lane in each direction, with 7-foot parkways and 5-foot sidewalks, for a total R/W width of 60 feet. A 100-foot inscribed diameter roundabout would be provided at the intersection

of Mangular Avenue and Chase Drive as a means to reduce speeds at the intersection. The roundabout would be designed to accommodate existing access to adjacent properties. A traffic signal would be placed at the intersection of Chase Drive and Foothill Parkway.

The existing Mangular Avenue is designated as a two-lane collector roadway in the *City of Corona General Plan* Circulation Element. However, from Chase Drive to approximately 900 feet north, the street was built as a narrower section, and has no sidewalk on the east side of the street. As part of the Chase Drive connection to Foothill Parkway, a portion of Mangular Avenue would be widened and improved to match existing Mangular Avenue to the north. The roadway section would be widened from approximately 31 feet to 44 feet, with one 10-foot traffic lane, a 5-foot Class II Bike Lane, and a 7-foot parking lane in each direction. A curb-adjacent 5-foot sidewalk and 3-foot parkway would be added on the east side of the street. These improvements would not require additional R/W, however they may require a construction easement. Overhead power lines located behind the existing easterly asphalt dike would be relocated behind the new easterly curb. Other utility relocations may also be required.

All of the same basic Project components for Foothill Parkway would be constructed. The following discussion evaluates the potential environmental impacts associated with the Chase Drive/Mangular Avenue Connection Alternative as compared to impacts from the proposed Project.

IMPACT COMPARISON TO THE PROPOSED PROJECT

Specific short-term construction impacts and long-term operational impacts are discussed below for each section included in this EIR.

Land Use and Planning

Implementation of the proposed alignment, as well as the With Chase Drive/Mangular Avenue Connection Alternative, may result in land use compatibility and access impacts to surrounding uses. Although the With Chase Drive/Mangular Avenue Connection Alternative would alter current conditions along the alignment, implementation of design features such as the location of the proposed alignment area, balancing earthwork, providing wildlife linkages, landscaping, and multi-purpose trails would serve to minimize impacts to adjacent uses. As with the proposed Project, potential land use compatibility and access impacts would be mitigated to less than significant levels with implementation of the recommended Mitigation Measures 5.4-1a, 5.4-1b, and 5.4-4 in Section 5.4, TRAFFIC AND CIRCULATION; Mitigation Measures 5.5-1a through 5.5-1d in Section 5.5, AIR QUALITY; and Mitigation Measures 5.6-1a through 5.6-2 in Section 5.6, NOISE. Therefore, the With Chase Drive/Mangular Avenue Connection Alternative would result in the same impact related to land use compatibility and access than the proposed Project.

The westerly extension of Foothill Parkway is identified within the *City of Corona General Plan* as being required to help alleviate congestion on the east/west routes within the City. The proposed westerly extension of Foothill Parkway is consistent with the *City of Corona General Plan* Circulation Element, RCCGP, CFP, RTIP, RTP,

and RCPG. Since the planning documents included above are not at the level of specificity that would reflect final design, such as including the connection at Border Avenue or Chase Drive/Mangular Avenue, the With Chase Drive/Mangular Avenue Connection Alternative would still be considered consistent with the City's *General Plan*. As such, the With Chase Drive/Mangular Avenue Connection Alternative would result in the same impact related to relevant planning policies as the proposed Project.

In conclusion, the With Chase Drive/Mangular Avenue Connection Alternative would result in less than significant impacts to land use compatibility and access, and consistency with relevant planning policies. The With Chase Drive/Mangular Avenue Connection Alternative would result in the same impact as the proposed Project in this regard.

Aesthetics, Light, and Glare

Similar to the proposed Project, construction of the With Chase Drive/Mangular Avenue Connection Alternative would include the extension of Foothill Parkway; however, the proposed Border Avenue connection would not be built. The aesthetic, light, and glare impacts associated with the With Chase Drive/Mangular Avenue Connection Alternative, although slightly reduced, would be similar to that of the proposed Project.

The With Chase Drive/Mangular Avenue Connection Alternative would result in the same short-term (construction) aesthetic impacts associated with grading, excavation, or construction activities as the proposed alignment. As with the proposed alignment, despite implementation of the recommended Mitigation Measure 5.2-1 significant and unavoidable short-term (construction) aesthetic impacts would occur due to exposure of construction activities to surrounding residential areas for a period of approximately two years. The With Chase Drive/Mangular Avenue Connection Alternative would result in slightly less short-term visual impacts than the proposed Project. However, construction-related visual impacts would remain significant and unavoidable for the With Chase Drive/Mangular Avenue Connection Alternative.

Similar to implementation of the proposed Project, development of the With Chase Drive/Mangular Avenue Connection Alternative would alter westward views to the Santa Ana Mountains. Views to the Santa Ana Mountains are considered a scenic resource within the City of Corona. Although implementation of the With Chase Drive/Mangular Avenue Connection Alternative would reduce visible streetscape in the Project area, impacts would be the same as the proposed Project due to the increased streetscape associated with Foothill Parkway. Impacts to scenic vistas would remain significant and unavoidable.

Similar to the proposed Project, the With Chase Drive/Mangular Avenue Connection Alternative would not impact City or State designated scenic highways. Therefore, no impacts would occur in this regard.

The visual quality at the Project site is defined as primarily rural and suburban. The nature of the area under the With Chase Drive/Mangular Avenue Connection Alternative is similar to the suburban landscape to the northwest, north, and east.

However, similar to the Project, the With Chase Drive/Mangular Avenue Connection Alternative would require significant and unavoidable alterations to the existing topography.

Development of the With Chase Drive/Mangular Avenue Connection Alternative would replace open space areas at the northern foothills of the Santa Ana Mountains with a developed streetscape, thus changing the visual quality of the site. Additionally, the With Chase Drive/Mangular Avenue Connection Alternative would require a similar amount of hardscape features (i.e., sound barriers, retaining walls, etc), and impacts in this regard would remain significant and unavoidable. Therefore, similar to the proposed Project, visual impacts to existing visual character/quality would remain significant and unavoidable.

As with the proposed Project, sources of light under the With Chase Drive/Mangular Avenue Connection Alternative would include street lighting and vehicular headlights along Foothill Parkway. However, it is unlikely that traffic signals would be installed along Foothill Parkway at Border Avenue, since the With Chase Drive/Mangular Avenue Connection Alternative does not include a connection to Border Avenue. Although light and glare impacts would be slightly reduced under the With Chase Drive/Mangular Avenue Connection Alternative, as with the proposed Project, street lighting and vehicular headlights from travelers on Foothill Parkway would increase light and glare within the area. Compliance with City of Corona's Street Light Standard (Standard Plan 502-0) and recommended Mitigation Measures 5.2-4a and 5.2-4b would be required to reduce long-term light and glare impacts to less than significant levels.

In conclusion, the With Chase Drive/Mangular Avenue Connection Alternative would result in slightly reduced impacts to aesthetics, light, and glare due to the reduced developed area. However, although the impacts would be slightly reduced, the With Chase Drive/Mangular Avenue Connection Alternative would result in the same significant and unavoidable impacts as the Project. Significant and unavoidable visual impacts would occur in regard to short-term construction, long-term impacts to scenic vistas, and long-term impacts to existing character/quality. Under the With Chase Drive/Mangular Avenue Connection Alternative, impacts to light and glare would be reduced as a result of fewer signalized intersections. Impacts pertaining to light and glare would be reduced to less than significant levels with mitigation, similar to the proposed Project.

Public Health and Safety

Due to the similarity of the With Chase Drive/Mangular Avenue Connection Alternative to the proposed Project, the impacts to public health and safety would be the same. As with the proposed alignment, under the With Chase Drive/Mangular Avenue Connection Alternative, no regulatory sites associated with hazardous waste/materials were reported and no corrective action, restoration, or remediation has been planned, is currently taking place, or has been completed. The proposed alignment has not been under investigation for violation of any environmental laws, regulations, or standards, however, the physical site inspection revealed that several potential RECs were observed within the immediate vicinity of the Project alignment. Due to the age of the structures within the proposed alignment (prior to the banned use of ACMs and LBPs in 1978), the potential for these materials to be present in

building materials is considered likely. As with the proposed alignment, demolition of structures that date pre-1978 could contain result in potential health hazards. In addition, eight regulatory properties associated with subsurface releases of hazardous materials are reported within one-quarter mile of the alignment. A REC caused by one or more of these sites is considered to be low due to the groundwater flow direction, distance, and/or the status of the identified sites. As with the proposed alignment, implementation of recommended Mitigation Measures 5.3-1a through 5.3-1k would be required to ensure potential impacts related to hazardous materials and wastes would be reduced to less than significant levels under the With Chase Drive/Mangular Avenue Connection Alternative.

As with the proposed Project, the With Chase Drive/Mangular Avenue Connection Alternative would not create a significant hazard to the public or the environment from routine transport, use, or disposal of hazardous materials due to the intended use, scope, and nature of the proposed undertaking. As with the proposed Project, the With Chase Drive/Mangular Avenue Connection Alternative would be required to comply with applicable Federal, State, and local regulations to reduce potential impacts to less than significant levels in this regard. The With Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

Project construction activities have the potential to create a significant hazard to the public through foreseeable upset and accidental conditions. As with the proposed alignment, the With Chase Drive/Mangular Avenue Connection Alternative would be required to comply with applicable Federal, State, and local regulations and implementation of recommended Mitigation Measures 5.3-3a through 5.3-3d to reduce potential impacts to less than significant levels in this regard. The With Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

As with the proposed Project, the With Chase Drive/Mangular Avenue Connection Alternative would not impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. In addition, prior to construction, the Project Contractor shall be required to submit a construction TMP, which will include restrictions on the hours and routes for construction traffic, as well as construction traffic safety measures. As with the proposed alignment, the With Chase Drive/Mangular Avenue Connection Alternative would be required to implement Mitigation Measures 5.4-1a and 5.4-1b in Section 5.4, TRAFFIC AND CIRCULATION, to reduce impacts less than significant levels. The With Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

As with the proposed Project, the With Chase Drive/Mangular Avenue Connection Alternative would not expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. The proposed alignment traverses the boundary of the Cleveland National Forest and is within close proximity to an existing brush fire area. Although the proposed extension of Foothill Parkway in and of itself does not pose a fire risk, the final design would be subject to review by the City of Corona Fire Department to ensure that fire regulations are met, such as ensuring adequate brush clearance of flammable vegetation to prevent the spread

of fire, the provision of fire hydrants, and adequate roadway design to provide for the efficient movement of fire equipment. Therefore, less than significant impacts are anticipated in this regard. The With Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

In conclusion, implementation of the With Chase Drive/Mangular Avenue Connection Alternative would result in less than significant impacts related to public health and safety. The With Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

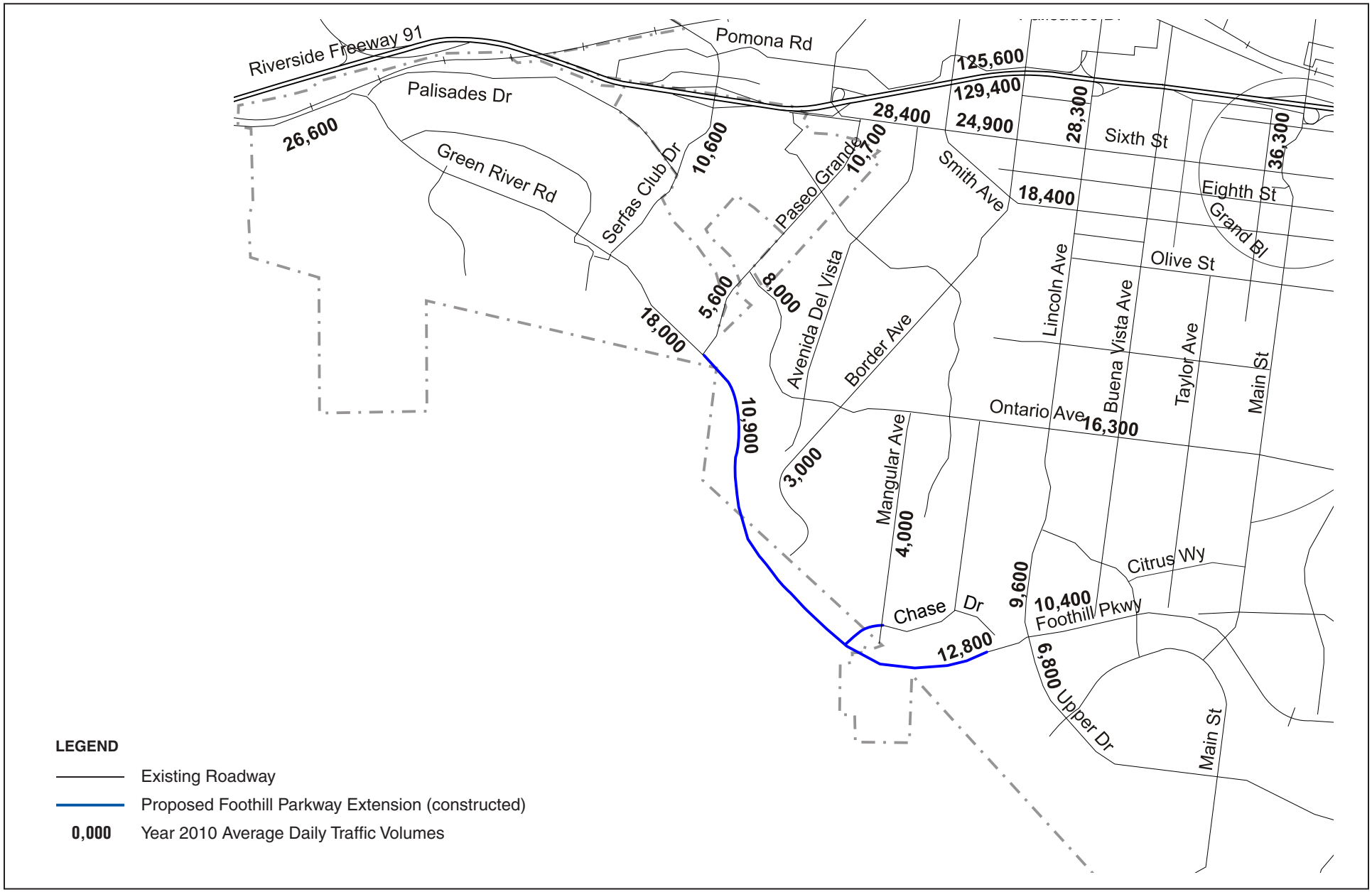
Traffic and Circulation

Forecast years 2010 and 2025 under the With Chase Drive/Mangular Avenue Connection Alternative assume improvements to the study roadway segments consistent with the City's *General Plan* Circulation Element. Table 7-6, YEARS 2010 AND 2025 WITH CHASE DRIVE/MANGULAR AVENUE CONNECTION ALTERNATIVE ADT VOLUMES AND LOS, summarizes the 2010 and 2025 ADT capacity, volume, and LOS of the roadway segments analyzed under the With Chase Drive/Mangular Avenue Connection Alternative. Figures 7-6, YEAR 2010 WITH CHASE DRIVE/MANGULAR AVENUE CONNECTION ALTERNATIVE ADT VOLUMES, and 7-7, YEAR 2025 WITH CHASE DRIVE/MANGULAR AVENUE CONNECTION ALTERNATIVE ADT VOLUMES, show forecast years 2010 and 2025 with Chase Drive/Mangular Avenue Connection Alternative ADT volumes.

Table 7-6
Years 2010 and 2025 With Chase Drive/Mangular Avenue Connection Alternative ADT Volumes and LOS

Study Roadway Segment	Capacity (ADT)	2010 Volume (ADT)	2010 V/C – LOS	2025 Volume (ADT)	2025 V/C – LOS
6th St w/o Smith Ave	53,900[1]	28,400	0.53 – A	42,700	0.79 – C
10th St w/o Lincoln Ave	25,900	18,400	0.71 – C	21,700	0.84 – D
Green River Rd w/o Palisades Dr	53,900[1]	26,600	0.49 – A	52,800	**0.98 – E**
Serfas Club Dr s/o SR-91	35,900	10,600	0.30 – A	28,700	0.80 – C
Paseo Grande n/o Foothill Pkwy	13,000	5,600	0.43 – A	7,600	0.58 – A
Ontario Ave e/o Paseo Grande	13,000	8,000	0.62 – B	11,300	0.87 – D
Ontario Ave e/o Lincoln Ave	35,900	16,300	0.45 – A	18,800	0.52 – A
Green River Rd w/o Paseo Grande	35,900	18,000	0.50 – A	29,000	0.81 – D
Foothill Pkwy e/o Paseo Grande	25,900	10,900	0.42 – A	21,600	0.83 – D
Foothill Pkwy e/o Lincoln Ave	25,900	10,400	0.40 – A	21,800	0.84 – D
Upper Dr s/o Foothill Pkwy	35,900	6,800	0.19 – A	7,900	0.22 – A
Border Ave north of Foothill Pkwy	13,000	3,000	0.23 – A	3,000	0.23 – A
Mangular Ave north of Foothill Pkwy	13,000	4,000	0.31 – A	4,600	0.35 – A
Lincoln Ave north of Foothill Pkwy	35,900	9,600	0.27 – A	9,100	0.25 – A

Notes:
ADT = Average Daily Traffic
LOS = Level of Service
V/C = Volume to Capacity ratio; deficient roadway segment operation shown in **bold**.
[1] ADT capacity reflects programmed improvements to 6th Street (west of Smith Avenue) and Green River Road (west of Palisades), to be completed in 2010.
Source: Meyer, Mohaddes Associates, June 2007.



Source: Meyer, Mohaddes Associates, June 2007.

FOOTHILL PARKWAY WESTERLY EXTENSION • DRAFT EIR

Year 2010 with Chase Drive/Mangular Avenue Connection Alternative ADT Volumes

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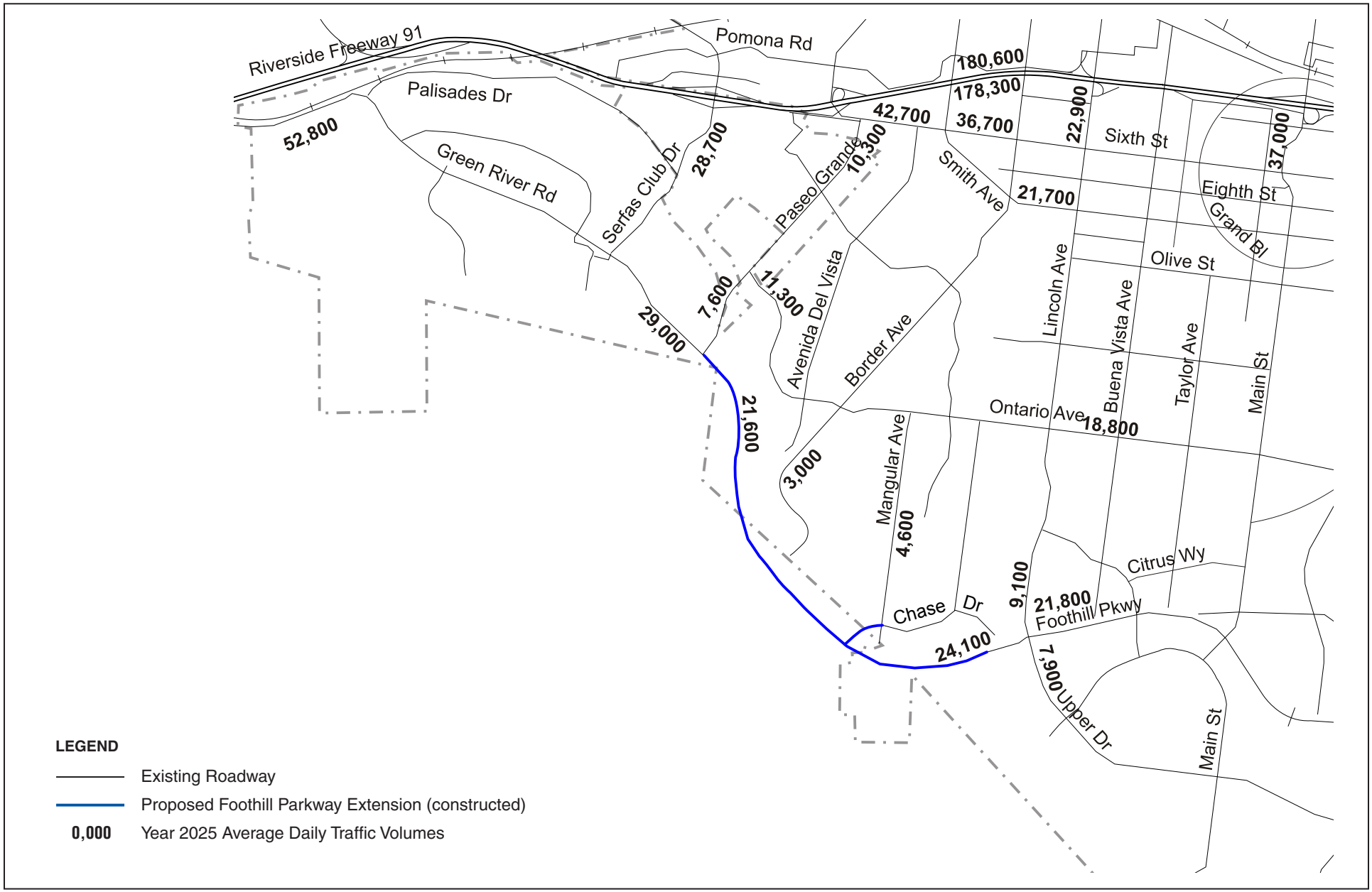
Figure 7-6



Source: Meyer, Mohaddes Associates, June 2007.

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Year 2025 with Chase Drive/Mangular Avenue Connection Alternative ADT Volumes

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Figure 7-7

As shown in Table 7-6 above, all study roadways are forecast to operate acceptably according to City of Corona performance criteria for forecast year 2010 under the With Chase Drive/Mangular Avenue Connection Alternative. In forecast year 2025, all roadways are expected to operate at LOS D or better, with the exception of the segment of Green River Road west of Palisades Drive, which is expected to operate at LOS E. Due to the roadway geometry and close proximity of this segment to State Route 91, this arterial is considered a critical link of the interchange; therefore, the City of Corona has identified LOS E as acceptable for this heavily traveled freeway interchange, consistent with the City's *General Plan* Circulation Element Policy 6.1.6. Therefore, all study roadways are forecast to operate acceptably according to City of Corona performance criteria for forecast years 2010 and 2025 for the With Chase Drive/Mangular Avenue Connection Alternative. None of the roadways analyzed are expected to exceed their capacity for forecast years 2010 and 2025 for the With Chase Drive/Mangular Avenue Connection Alternative.

Compared to the No Project conditions, the traffic volumes along Green River Road, Upper Drive, Mangular Avenue and Foothill Parkway increased and traffic volumes along 6th Street, 10th Street, Serfas Club Drive, Paseo Grande, Ontario Avenue, and Lincoln Avenue decreased in year 2010 under the With Chase Drive/Mangular Avenue Connection Alternative. Similar to the No Project conditions, traffic volumes along Border Avenue would remain unchanged in year 2010 under the With Chase Drive/Mangular Avenue Connection Alternative. Compared to the No Project Alternative for year 2010, traffic volumes under the With Chase Drive/Mangular Avenue Connection Alternative would increase by 200 vehicles per day along Mangular Avenue. This increase in traffic volume translates to a percentage increase of five percent along Mangular Avenue.

Compared to the No Project conditions for year 2025, the traffic volumes along Green River Road, Foothill Parkway, Upper Drive, and Mangular Avenue increased and traffic volumes along 6th Street, 10th Street, Serfas Club Drive, Paseo Grande, Ontario Avenue, and Lincoln Avenue decreased under the With Chase Drive/Mangular Avenue Connection Alternative due to the redistribution of traffic. Similar to the No Project conditions, traffic volumes along Border Avenue would remain unchanged in year 2025 under the With Chase Drive/Mangular Avenue Connection Alternative. Compared to the No Project Alternative for year 2025, traffic volumes under the With Chase Drive/Mangular Avenue Connection Alternative would increase by 800 vehicles per day along Mangular Avenue. This increase in traffic volume translates to a growth of 21 percent along Mangular Avenue. Overall, the With Chase Drive/Mangular Avenue Connection Alternative would serve to improve traffic circulation within the area through the redistribution of traffic volumes, relative to the No Project scenario.

Compared to the proposed Project, the With Chase Drive/Mangular Avenue Connection Alternative resulted in an increase in traffic volumes along Paseo Grande, Ontario Avenue, and Green River Road (west of Paseo Grande) and a decrease in volumes along Foothill Parkway and Border Avenue in year 2010. Traffic volumes along 6th Street, 10th Street, Green River Road (west of Palisades Drive), Serfas Club Drive, Upper Drive, and Lincoln Avenue would remain unchanged in year 2010. Additionally, similar to the proposed alignment, traffic volumes along Mangular Avenue would remain unchanged. Compared to the proposed Project conditions for year 2010, traffic volumes under the With Chase

Drive/Mangular Avenue Connection Alternative would decrease by 100 vehicles per day along Border Avenue. This reduction in traffic volume translates to a three percent reduction along Border Avenue.

Compared to the proposed Project for year 2025, the traffic volumes along Paseo Grande, Ontario Avenue (east of Paseo Grande), and Mangular Avenue increased and traffic volumes along Foothill Parkway and Border Avenue decreased under the With Chase Drive/Mangular Avenue Connection Alternative due to the redistribution of traffic. Traffic volumes along 6th Street, 10th Street, Serfas Club Drive, Green River Road, Upper Drive, Ontario Avenue (east of Lincoln Avenue), and Lincoln Avenue would remain unchanged in year 2025 under the With Chase Drive/Mangular Avenue Connection Alternative. Compared to the proposed alignment conditions for year 2025, traffic volumes under the With Chase Drive/Mangular Avenue Connection Alternative would be reduced by approximately 600 vehicles per day along Border Avenue and increased by 100 vehicles per day along Mangular Avenue. This represents a 17 percent reduction in traffic volume along Border Avenue and a two percent increase along Mangular Avenue.

This alternative yields focused neighborhood study results different from the proposed Project. As in the proposed Project reductions in volumes are expected on Four Kings Road and on the north end of Mangular Avenue, near Ontario. It is expected that much of the traffic on Four Kings Road will shift from that residential street to the proposed Chase Drive connection, a designated collector road. However, without the Border Avenue connection, traffic volumes on Border Avenue are expected to remain approximately the same as the existing condition. In the proposed Project, volumes on the north end of Border Avenue, near John Adams Elementary School, are expected to decrease. Additionally, the City's analysis concluded that new cut through traffic may develop between Border Avenue and Mangular Avenue through a residential neighborhood via Mesquite Lane, Peacock Lane, Earl Street, Patriot Way, and Freedom Drive. Figure 7-8, Year 2010 FOCUSED NEIGHBORHOOD TRAFFIC WITH CHASE DRIVE/MANGULAR AVENUE CONNECTION ALTERNATIVE, shows the focused neighborhood study results for the With Chase Drive/Mangular Avenue Connection Alternative.

The current layout of fire station locations within the City was planned based on the City's *General Plan* Circulation Element, which assumes that the extension of Foothill Parkway and connections to Border Avenue and Chase Drive will be constructed. The With Chase Drive/Mangular Avenue Connection Alternative would not connect proposed Foothill Parkway to Border Avenue. Without this connection, emergency response times to the neighborhoods adjacent to this local roadway will be longer than in the Project condition.

The With Chase Drive/Mangular Avenue Connection Alternative roadway alignment would operate similarly to the proposed Project. However, without the proposed Border Avenue connection to Foothill Parkway, a difference in the traffic distribution on the local road network would occur under the With Chase Drive/Mangular Avenue Connection Alternative, as access to the Project site would be available only from Green River Road, future Chase Drive/Mangular Avenue connection, and the existing terminus of Foothill Parkway. In the forecast year 2010, a decreased level of service is expected on Ontario Avenue (east of Paseo Grande) from LOS A to LOS B, relative to the proposed Project. This decreased LOS is within the City of Corona

roadway performance criteria. In year 2025, all of the roadways are expected to operate at the same level of service as the proposed Project, and are within the City of Corona performance criteria.

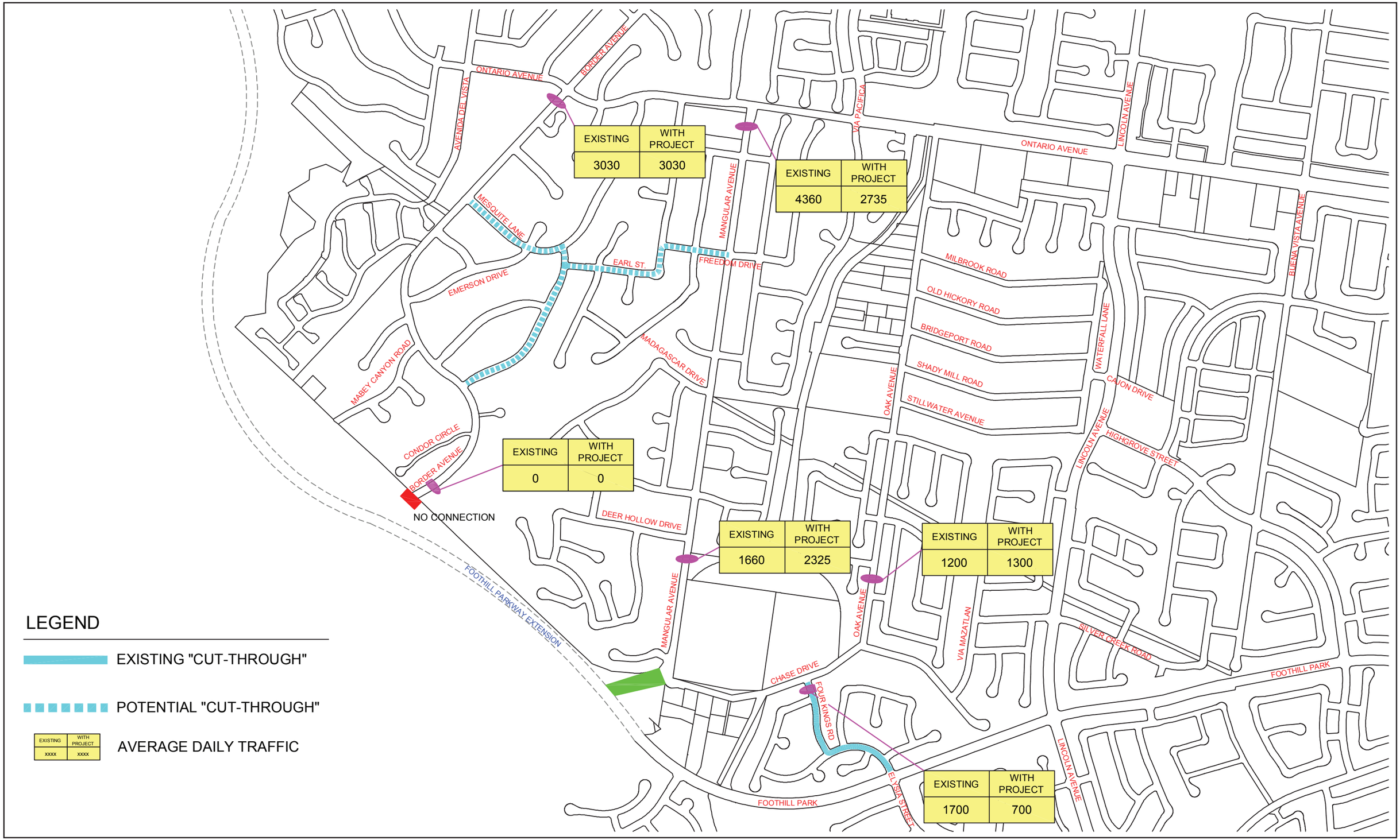
In conclusion, in both forecast years 2010 and 2025, all of the roadways under the With Chase Drive/Mangular Avenue Connection Alternative are expected to operate within the City of Corona performance criteria. Without the connection at Border Avenue, a decreased level of service is anticipated on Ontario Avenue (east of Paseo Grande) relative to the proposed Project, and emergency response time would be longer for a portion of the community than in the proposed Project. However, the With Chase Drive/Mangular Avenue Connection Alternative would result in less than significant impacts, similar to the proposed Project.

Air Quality

As only one connection is proposed, the With Chase Drive/Mangular Avenue Connection Alternative would not operate as efficiently as the proposed Project. The proposed Border Avenue connection, which would serve as an additional access point to the proposed Foothill Parkway Extension, would not be available. Similar to the development of the proposed Project, significant and unavoidable short-term (construction) emission impacts would occur under the With Chase Drive/Mangular Avenue Connection Alternative. Compared to development of the proposed Project, short-term (construction) emission impacts would be slightly reduced because the proposed Border Avenue connection would not be constructed. Therefore construction impacts associated with this connection would not occur. Similar to the proposed Project, implementation of Mitigation Measures 5.5-1a through 5.5-1d would reduce short-term (construction) emission impacts; however, due to the amount of grading required, impacts would remain significant and unavoidable under the With Chase Drive/Mangular Avenue Connection Alternative.

With regards to long-term (operational) air quality impacts, the With Chase Drive/Mangular Avenue Connection Alternative would not improve air quality or traffic/circulation to the same degree as the proposed Project. Less traffic would be redistributed along other roadways within the area, which could potentially increase vehicle queuing and idling times at surrounding roadway intersections. Increased idling and vehicle queuing could result in higher concentrations of CO; however, an exceedance of State or Federal CO standards is not anticipated. As with the proposed alignment, this alternative would result in less than significant long-term (operational) air quality impacts.

In conclusion, the Chase Drive/Mangular Avenue Connection Alternative would result in significant unavoidable short-term (construction) emission impacts and less than significant long-term (operational) air quality impacts. The Chase Drive/Mangular Avenue Connection Alternative would have slightly less short-term (construction) emission air quality impacts and greater long-term(operational) impacts than the proposed Project.



Source: City of Corona Traffic Engineering Department, 6/13/07.

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Year 2010 Focused Neighborhood Traffic with Chase Dr./Mangular Ave. Connection Alternative

Figure 7-8

Back of 11 x 17 page

Noise

The With Chase Drive/Mangular Avenue Connection Alternative shares the same horizontal and vertical alignment as the proposed Project, with the exception of the proposed Border Avenue connection. Therefore, potential short-term construction and long-term operational (traffic) noise impacts along Foothill Parkway would be relatively similar to the proposed alignment.

Noise generated from construction crews and the transportation of construction equipment and materials to the Project site would result in a temporary increase in ambient noise levels in the Project vicinity. The With Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard. However, as with the proposed Project, operation of construction equipment for the development of the With Chase Drive/Mangular Avenue Connection Alternative would result in substantial (exceeding noise standards) temporary and periodic increases of the ambient noise levels in the Project vicinity above existing conditions, due to grading and construction activities. Therefore, short-term construction noise impacts would be significant and unavoidable. As such, the With Chase Drive/Mangular Avenue Connection Alternative would result in the same short-term construction impacts as the proposed Project.

The *Noise Impact Analysis* evaluated long-term operational (traffic) impacts under the With Chase Drive/Mangular Avenue Connection Alternative (refer to Table 7-7, YEAR 2025 WITH CHASE DRIVE/MANGULAR AVENUE CONNECTION ALTERNATIVE TRAFFIC NOISE LEVELS, for noise levels).

Table 7-7
Year 2025 With Chase Drive/Mangular Avenue Connection Alternative Traffic Noise Levels

Receptor Number	Location	Existing Noise Level[1] (dBA CNEL)	No Project (dBA CNEL)	Proposed Alignment (dBA CNEL)	"Chase Drive/ Mangular Avenue Connection" Alternative (dBA CNEL)
R-1	San Antonio Drive	**66**[2]	**68**	**66**	**66**
R-2	San Antonio Drive	**66**	**68**	65	65
R-3	San Antonio Drive	**68**	**69**	65	**65**
R-4	San Rafael Drive	**73**	**74**	**71**	**71**[2]
R-5	San Rafael Drive	**73**	**74**	**71**	**71**[2]
R-6	San Rafael Drive	**73**	**74**	**71**	**71**[2]
R-7	Adobe Avenue	57	58	60	60
R-8	Adobe Avenue	56	57	62	61
R-9	Adobe Avenue	53	55	64	64
R-10	Adobe Avenue	51	52	64	64
R-11	Adobe Avenue	48	49	64	63
R-12	Adobe Avenue	52	53	58	57
R-13	Adobe Avenue	51	53	58	58

Table 7-7 (Continued)
Year 2025 With Chase Drive/Mangular Avenue Connection Alternative Traffic Noise Levels

Receptor Number	Location	Existing Noise Level[1] (dBA CNEL)	No Project (dBA CNEL)	Proposed Alignment (dBA CNEL)	"Chase Drive/ Mangular Avenue Connection" Alternative (dBA CNEL)
R-14	Adobe Avenue	50	52	58	58
R-15	Adobe Avenue	48	50	60	59
R-16	Adobe Avenue	49	50	59	59
R-17	Adobe Avenue	48	49	58	57
R-18	Adobe Avenue	43	45	58	58
R-19	Adobe Avenue	44	46	56	55
R-20	Adobe Avenue	44	46	54	54
R-21	Adobe Avenue	44	45	53	52
R-22	Avenida Del Vista	48	49	56	56
R-23	Avenida Del Vista	47	48	54	54
R-24	Avenida Del Vista	46	47	53	53
R-25	Avenida Del Vista	45	47	52	51
R-26	Avenida Del Vista	42	44	60	60
R-27	Avenida Del Vista	37	38	59	59
R-28	Avenida Del Vista	35	37	58	58
R-29	Avenida Del Vista	36	38	60	60
R-30	Avenida Del Vista	40	42	61	61
R-31	Avenida Del Vista	34	35	58	58
R-32	Avenida Del Vista	35	36	59	59
R-33	Avenida Del Vista	35	36	60	59
R-34	Avenida Del Vista	35	36	59	59
R-35	Avenida Del Vista	37	39	60	60
R-36	Avenida Del Vista	38	40	61	61
R-37	Chisholm Trail Circle	37	39	63	62
R-38	Chisholm Trail Circle	38	39	62	62
R-39	Chisholm Trail Circle	38	39	60	59
R-40	Chisholm Trail Circle	37	39	57	57
R-41	Chisholm Trail Circle	38	39	57	56
R-42	Chisholm Trail Circle	37	38	57	57

Table 7-7 (Continued)
Year 2025 With Chase Drive/Mangular Avenue Connection Alternative Traffic Noise Levels

Receptor Number	Location	Existing Noise Level[1] (dBA CNEL)	No Project (dBA CNEL)	Proposed Alignment (dBA CNEL)	"Chase Drive/ Mangular Avenue Connection" Alternative (dBA CNEL)
R-43	Vixen Trail Circle	38	39	61	61
R-44	Vixen Trail Circle	38	39	59	58
R-45	Vixen Trail Circle	38	39	57	57
R-46	Vixen Trail Circle	38	39	56	56
R-47	Vixen Trail Circle	37	38	57	57
R-48	Raven Circle	36	36	56	56
R-49	Raven Circle	36	37	55	55
R-50	Raven Circle	38	38	57	56
R-51	Raven Circle	39	39	55	55
R-52	Falcon Circle	37	37	60	60
R-53	Falcon Circle	38	39	59	59
R-54	Falcon Circle	40	40	57	57
R-55	Condor Circle	41	41	63	63
R-56	Condor Circle	42	42	61	60
R-57	Condor Circle	51	52	65	62
R-58	Condor Circle	49	49	61	61
R-59	Condor Circle	48	48	58	58
-60	Condor Circle	53	53	59	58
R-61	Condor Circle	60	60	63	63
R-62	Condor Circle	57	57	59	59
R-63	Eagle Circle	55	55	57	57
R-64	Cape Drive	46	47	52	51
R-65	Cape Drive	48	48	53	53
R-66	Cape Drive	46	46	53	53
R-67	Cape Drive	45	45	52	52
R-68	Cape Drive	44	44	51	51
R-69	Cape Drive	43	43	51	51
R-70	Bonnyview Circle	43	44	53	52
R-71	Bonnyview Circle	43	43	53	53
R-72	Bonnyview Circle	42	42	54	54
R-73	Bonnyview Circle	41	42	55	55
R-74	Bonnyview Circle	40	41	55	55
R-75	Clearview Circle	40	41	64	64
R-76	Clearview Circle	40	41	61	61
R-77	Clearview Circle	42	43	60	60
R-78	Clearview Circle	40	40	62	62

Table 7-7 (Continued)
Year 2025 With Chase Drive/Mangular Avenue Connection Alternative Traffic Noise Levels

Receptor Number	Location	Existing Noise Level[1] (dBA CNEL)	No Project (dBA CNEL)	Proposed Alignment (dBA CNEL)	"Chase Drive/ Mangular Avenue Connection" Alternative (dBA CNEL)
R-79	Clearview Circle	41	41	60	59
R-80	Clearview Circle	42	43	58	58
R-81	Meadowcrest Way	40	41	61	61
R-82	Meadowcrest Way	42	43	61	61
R-83	Meadowcrest Way	45	45	64	64
R-84	Meadowcrest Way	49	49	64	64
R-85	Meadowcrest Way	52	52	62	62
R-86	Meadowcrest Way	45	46	58	58
R-87	Meadowcrest Way	49	49	57	57
R-88	Meadowcrest Way	57	57	59	59
R-89	Mangular Avenue	54	54	57	57
R-90	Mangular Avenue	46	47	61	61
R-91	Mangular Avenue	48	50	63	63
R-92	Chase Drive	46	47	57	57
R-93	Chase Drive	45	46	55	55
R-94	Foothill Parkway	38	40	58	58
R-95	Foothill Parkway	44	45	63	63
R-96	Folson Circle	44	47	56	56
R-97	Folson Circle	46	49	58	58
R-98	Folson Circle	53	55	**67**	**67**
R-99	Folson Circle	52	55	62	62
R-100	Folson Circle	49	52	59	59
R-101	Fanning Circle	55	58	63	63
R-102	Fanning Circle	63	65	**71**	**71**
R-103	Fanning Circle	61	63	**68**	**68**
R-104	Fanning Circle	54	57	62	62
R-105	Corbett Road	50	53	58	58
R-106	Corbett Road	49	51	57	57
R-107	Chase Drive	55	56	64	64
R-108	Skyline Drive	54	56	63	63
R-109	Amethyst Street	53	54	61	61
R-110	Amethyst Street	48	50	56	56
R-111	Amethyst Street	47	49	56	56
R-112	Amethyst Street	46	49	55	55
R-113	Amethyst Street	50	51	58	58
R-114	Amethyst Street	48	50	57	57

Table 7-7 (Continued)
Year 2025 With Chase Drive/Mangular Avenue Connection Alternative Traffic Noise Levels

Receptor Number	Location	Existing Noise Level[1] (dBA CNEL)	No Project (dBA CNEL)	Proposed Alignment (dBA CNEL)	"Chase Drive/ Mangular Avenue Connection" Alternative (dBA CNEL)
R-115	Elysia Street	51	52	59	59
R-116	Elysia Street	51	52	60	60
R-117	Elysia Street	53	54	61	61
R-118	Elysia Street	52	54	61	61
R-119	Bonsai Circle	55	57	63	63
R-120	Bonsai Circle	55	57	64	64
R-121	Bonsai Circle	56	57	64	64
R-122	Duxbury Circle	53	56	62	62
R-123	Duxbury Circle	57	60	65	65
R-124	Duxbury Circle	52	53	60	60
R-125	Duxbury Circle	52	54	61	61
R-126	Duxbury Circle	53	55	62	62
R-127	Duxbury Circle	54	56	63	63
R-128	Greenvale Circle	49	50	57	57
R-129	Greenvale Circle	47	49	55	55
R-130	Langtree Lane	48	50	56	56
R-131	Langtree Lane	48	49	55	55
R-132	Langtree Lane	48	50	55	55
R-133	Langtree Lane	48	49	54	54
R-134	Stoneyberry Lane	48	49	52	52
R-135	Athlone Lane	59	61	**68**	**68**
R-136	Athlone Lane	59	60	**67**	**67**
R-137	Athlone Lane	58	59	**66**	**66**
R-138	Athlone Lane	62	64	70	70
R-139	Athlone Lane	61	63	**69**	**69**
R-140	Athlone Lane	58	60	65	65
R-141	Chase Drive	56	58	65	65
R-142	Chase Drive	61	63	**68**	**68**
R-143	Chase Drive	59	61	65	65
R-144	Brunstane Circle	60	62	65	65
R-145	Brunstane Circle	64	65	**69**	**69**
R-146	Brunstane Circle	63	64	**68**	**68**
R-147	Brunstane Circle	65	**66**	**68**	**69**
R-148	Brunstane Circle	65	**66**	**66**	**67**

Table 7-7 (Continued)
Year 2025 With Chase Drive/Mangular Avenue Connection Alternative Traffic Noise Levels

Receptor Number	Location	Existing Noise Level[1] (dBA CNEL)	No Project (dBA CNEL)	Proposed Alignment (dBA CNEL)	"Chase Drive/ Mangular Avenue Connection" Alternative (dBA CNEL)
R-149	Brunstane Circle	61	62	64	64
R-150	Brunstane Circle	63	64	64	64

Notes:

dBA = A-weighted decibel scale
CNEL = Community Noise Equivalent Level

* All numbers in bold represent noise levels that exceed the City's exterior noise standards of 65 dBA CNEL.

[1] At locations with low vehicular traffic, ambient noise level measurements were used to establish existing noise levels at modeled receptor locations.

[2] Due to the reduction in average daily traffic (ADT) along Paseo Grande noise levels at this location would be reduced.

Source: *Noise Impact Analysis: Foothill Parkway Westerly Extension*, LSA Associates, Inc., January 2008.

As shown in Table 7-7 above, the following 18 receptor locations, out of 150 modeled receptors, would be exposed to noise levels that exceed the 65 dBA CNEL for year 2025 under the With Chase Drive/Mangular Avenue Connection Alternative. Compared to the proposed Project, the With Chase Drive/Mangular Avenue Connection Alternative would exceed the noise standard for one more receptor location than the proposed Project.

- **R-1 and R-4 through R-6,** these receptor locations represent existing residences located at San Antonio Drive and San Rafael Drive that have outdoor active use areas exposed to traffic noise on Green River Road and Paseo Grande. These receptors would not experience a Project-related noise increase of 3 dBA or more. Currently, no existing walls reduce noise levels for these residences. Traffic noise levels at these receptor locations are contributed by other roadways in the Project area, such as Green River Road and Paseo Grande, and the Project traffic would not contribute significantly to these receptors. Therefore, no sound barriers were evaluated to mitigate noise impacts to these residences.

- **R-98,** this receptor location represents an existing residence located at Folson Circle that has outdoor active use areas exposed to traffic noise on Foothill Parkway. This receptor location would experience a Project-related noise increase of 3dBA or more. No existing sound barriers were assumed for this residence. One sound barrier was modeled and recommended as mitigation to reduce noise impacts to this residence.

- **R-102 and R-103,** these receptor locations represent existing residences located at Fanning Circle that have outdoor active use areas exposed to traffic noise along the proposed Foothill Parkway. These receptors would experience a Project-related noise increase of 3 dBA or more. No existing

barriers were assumed for these residences. One sound barrier was modeled and recommended as mitigation to reduce noise impacts to these residences.

- **R-135 through R-140, R-142, R-145, and R-146,** these receptor locations represent existing residences located at Athlone Lane, Chase Drive, and Brunstane Circle that have outdoor active use areas exposed to traffic noise on Foothill Parkway. These receptors would experience a Project-related noise increase of 3 dBA or more. An existing wall 6 ft in height along the residential property line currently reduces noise levels for these residences. One sound barrier was modeled and recommended as mitigation to reduce noise impacts to these residences.

- **R-147,** this receptor location represents an existing residence located at Brunstane Circle that has outdoor active use areas exposed to traffic noise on the existing Foothill Parkway. This receptor would not experience a Project-related noise increase of 3 dBA or more under the With Chase Drive/Mangular Avenue Connection. Therefore, no sound barriers were evaluated to mitigate noise impacts to these residences.

- **R-148,** this receptor location represents an existing residence located at Brunstane Circle that has outdoor active use areas exposed to traffic noise on the existing Foothill Parkway and Lincoln Avenue. This receptor would not experience a Project-related noise increase of 3 dBA or more. Traffic noise levels at this receptor location is contributed by other roadways in the Project area, such as Lincoln Avenue, and the Project traffic would not contribute significantly to this receptor. Therefore, no sound barriers were evaluated to minimize noise impacts to this residence.

As with the proposed Project, the following sound barriers were analyzed and recommended to mitigate impacts to the sensitive receptor locations that would experience a Project-related noise increase of 3 dBA or more and would be exposed to a traffic noise level exceeding the City's exterior noise standard of 65 dBA CNEL under the With Chase Drive/Mangular Avenue Connection Alternative:

- **Sound Barrier 1,** is located along the proposed Foothill Parkway along the residential property line to minimize noise impacts to receptor R-98. A minimum barrier height of 6 feet would reduce traffic noise levels to 65 dBA CNEL or below.

- **Sound Barrier 2,** is located along the proposed Foothill Parkway along the residential property line to minimize noise impacts to receptors R-102 and R-103. A minimum barrier height of 6 feet would reduce traffic noise levels to 65 dBA CNEL or below. It should be noted that a perimeter wall already exists in this current location. Prior to issuance of grading permits, the existing wall's acoustical barrier efficiency shall be tested to ensure it meets the requirements to reduce noise levels below 65 dBA.

- **Sound Barrier 3,** is located along the proposed Foothill Parkway along the residential property line to minimize noise impacts to receptors R-135 through R-140, R-142, R-145, and R-146. A minimum barrier height of 8 to 10 feet would reduce traffic noise levels to 65 dBA CNEL or below.

No sound barriers were analyzed for sensitive receptors that would not be exposed to a traffic noise level exceeding 65 dBA CNEL or that would experience an increase in Project-related noise levels less than 3 dBA.

Under the With Chase Drive/Mangular Avenue Connection Alternative, with the incorporation of recommended Mitigation Measure 5.6-2 (Sound Barriers 1 through 3) long-term operational (traffic) noise impacts would be reduced below the City's noise exterior standards of 65 dBA CNEL. The With Chase Drive/Mangular Avenue Connection Alternative would require the same mitigation as the proposed Project in order to reduce impacts to less than significant impact in this regard. Long-term operational traffic noise impacts under the With Chase Drive/Mangular Avenue Connection Alternative, as mitigated, would be the same as the proposed Project in this regard.

In conclusion, as with the proposed Project, the With Chase Drive/Mangular Avenue Connection Alternative would result in significant and unavoidable short-term construction noise impacts and less than significant long-term operational (traffic) impacts. The With Chase Drive/Mangular Avenue Connection Alternative would result in the same short-term construction noise impacts and the same long-term operational (traffic) noise impacts, as mitigated, as the Proposed Project.

Biological Resources

Compared to development of the proposed Project, the With Chase Drive/Mangular Avenue Connection Alternative would result in similar short-term impacts to biological resources associated with grading, excavation, and construction activities. These impacts could include increased runoff that may affect water quality, increased lighting that would affect the behavior patterns of nocturnal and crepuscular (active at dawn and dusk) wildlife, increased dust accumulation on surrounding vegetation, impacts on nesting birds/raptors, increased fire danger, and spread of exotic species. As with the proposed Project, the With Chase Drive/Mangular Avenue Connection Alternative would be required to implement Mitigation Measure 5.5-1a (i.e. standard dust suppression) in Section 5.5, AIR QUALITY to reduce construction-related dust generation. Therefore, the indirect effect of impairing respiration of existing plant species on the Project site is considered less than significant. As with the proposed Project, the With Chase Drive/Mangular Avenue Connection Alternative would be required to implement of Mitigation Measures 5.7-1a through 5.7-1c to reduce short-term construction related impacts to biological resources to less than significant. As such, the With Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Alternative in this regard.

Vegetation impacts under the With Chase Drive/Mangular Avenue Connection Alternative would be less than the proposed Project. Native and non-native vegetation impacts associated with the proposed Project are illustrated in Figure 5.7-5 in Section 5.7, VEGETATION IMPACTS. A summary of vegetation impacts under the proposed Project and this Alternative are described in Table 7-8, WITH CHASE DRIVE/MANGULAR AVENUE CONNECTION ALTERNATIVE VEGETATION IMPACTS.

Table 7-8
With Chase Drive/Mangular Avenue Connection Alternative Vegetation Impacts

Vegetation Type	Proposed Project (Acres)	"With Chase Drive/Mangular Avenue Connection" Alternative (Acres)	Difference
Coastal Sage Scrub	**7.25**	**7.17**	**-0.08**
Coastal Sage Scrub/Chaparral	14.02	14.02	0.00
Coastal Sage Scrub/Ruderal	**0.15**	**0.12**	**-0.03**
California Buckwheat-Scalebroom Alluvial Scrub	2.42	2.42	0.00
Chaparral	22.84	22.84	0.00
Non-native Grassland	1.76	1.76	0.00
Fremont Cottonwood-Willow Riparian Woodland	0.40	0.40	0.00
Willow Riparian Woodland	0.25	0.25	0.00
Western Sycamore-Coast Live Oak Alluvial Scrub	0.97	0.97	0.00
Coast Live Oak Woodland	5.06	5.06	0.00
Mule Fat Scrub	0.78	0.78	0.00
Mule Fat Scrub-Willow Riparian Woodland	0.00	0.00	0.00
Ruderal	4.81	4.81	0.00
Ornamental	2.20	2.20	0.00
Ornamental/Developed	**1.97**	**1.51**	**-0.46**
Disturbed	3.96	3.96	0.00
Developed/Ruderal	7.31	7.31	0.00
Developed	3.25	3.25	0.00
Total	**79.40**	**78.83**	**-0.57**

Note: Vegetation types and numbers in **bold** represent vegetation impacts that differ from the proposed Project.

Source: BonTerra Consulting, Amber Oneal, Senior Project Manager/Ecologist, electronic communication, July 17, 2008.

Development of the proposed Project would impact approximately 79.40 acres of native and non-native vegetation types. The With Chase Drive/Mangular Avenue Connection Alternative would impact 78.83 acres of native and non-native vegetation types.

The With Chase Drive/Mangular Avenue Connection Alternative would impact the same vegetation acreage as the proposed Project for 15 vegetation types, as indicated in Table 7-8. Similar to the proposed Project, compliance with relevant measures from the Western Riverside MSHCP and recommended Mitigation Measures 5.7-2a and 5.7-2b would reduce impacts to a less than significant level in this regard. As such, the With Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

The With Chase Drive/Mangular Avenue Connection Alternative would result in fewer impacts than the proposed Project on coastal sage scrub by 0.08 acres, coastal sage scrub/ruderal by 0.03 acres, and ornamental/development by 0.46 acres. Coastal

sage scrub vegetation is proposed for conservation within the MSHCP Criteria Area; however, the Project site is not located within the Criteria Area. Impacts on these vegetation types are considered adverse but mitigated by the City of Corona's participation in the MSHCP. Therefore, as with the proposed Project, this Alternative would result in less than significant impacts in this regard and no mitigation would be required. Ornamental/development vegetation generally has low biological value because they are composed of unvegetated areas or are vegetated with non-native species. These areas generally provide limited habitat for native plant and wildlife species, although they may occasionally be used by native species. Therefore, impacts on ornamental/development vegetation would not be considered significant. Therefore, as with the proposed Project, this Alternative would result in less than significant impacts in this regard and no mitigation would be required.

Impacts on local travel routes under the With Chase Drive/Mangular Avenue Connection Alternative would be similar to the proposed Project. As with the proposed Project, the With Chase Drive/Mangular Avenue Connection Alternative would remove local travel routes within the direct impact area. However, few native habitat areas would be located northeast of the Project site. Therefore, this Alternative would not be expected to substantially impact wildlife movement along local travel routes. In addition, there are several local travel routes remaining to the southwest of the Project site. As with the proposed Project, the With Chase Drive/Mangular Avenue Connection Alternative would result in less than significant impacts on local wildlife movement and no mitigation would be required. As such, the With Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

Impacts on regional wildlife movement under the With Chase Drive/Mangular Avenue Connection Alternative would be similar to the proposed Project. The With Chase Drive/Mangular Avenue Connection Alternative would adversely affect regional wildlife movement along a segment of Wardlow Wash. Fresno Canyon, located 1.5 miles west of the Project site, was identified for preservation by the MSHCP to maintain the linkage between the Cleveland National Forest and the Santa Ana River/Prado Basin while Wardlow Wash has not been identified for long-term preservation. Thus, although Wardlow Wash functions as a regional wildlife corridor between the Cleveland National Forest and the Santa Ana River/Prado Basin and impacts on wildlife movement along Wardlow Wash are considered significant, the impact is considered mitigated by the City of Corona's participation in the MSHCP. Therefore, as with the proposed Project, the With Chase Drive/Mangular Avenue Connection Alternative would result in less than significant impacts in this regard and no mitigation would be required. However, it is recommended that the base of the manufactured slope of the road be vegetated with native species to retain potential for some wildlife movement in Wardlow Wash (refer to Mitigation Measure 5.7-4). In addition, it is recommended that the culvert conveying water from Wardlow Wash under Paseo Grande remain large enough to allow for continued movement of wildlife species. The existing 8-foot culvert is sufficient for movement of medium-sized wildlife. Recreational trails, access roads, and wildlife movement have been considered in the design of two multi-purpose trails as part of the proposed alignment and this Alternative would also incorporate the proposed trails.

No special status plant species are located within the proposed Border Avenue connection and all on-site special status plants are located along the Foothill Parkway. As such, impacts to special status plants would be the same under the With Chase Drive/Mangular Avenue Connection Alternative as the proposed Project. As with development of the proposed alignment, the With Chase Drive/Mangular Avenue Connection Alternative would be required to implement Mitigation Measure 5.7-5 to would reduce impacts on intermediate mariposa lily and Coulter's matilija poppy to less than significant levels.

Suitable habitat is present on the Project site for the least Bell's vireo, a species listed in Section 6.1.2 of the MSHCP as a species that requires additional surveys if suitable habitat is present. This species was not observed during the 2000 or 2006 focused surveys. The least Bell's vireo was observed on only one visit and was therefore considered a migrant using the Project site for dispersal. Although, the Project site was not occupied for breeding in 2008, the Project site does contain potentially suitable breeding habitat that could be occupied in the future. Any impact on this species would be considered significant. As with the proposed Project, the With Chase Drive/Mangular Avenue Connection Alternative would result in less than significant impacts to the least Bell's vireo with implementation of Mitigation Measure 5.7-6a. As such, the With Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

Although suitable habitat is present on the Project site, burrowing owl was determined to be absent from the Project site at this time because it was not detected during the 2006 or 2008 focused surveys. However, suitable habitat is present on the Project site and the Project site is located within the additional survey area for this species; therefore, burrowing owl may move into the Project site prior to the start of construction. Any impact on an active burrowing owl burrow would be considered a significant impact. Per MSHCP requirements, a pre-construction survey for burrowing owl would be required to confirm absence of this species from the Project impact area prior to the start of construction. As with the proposed Project, the With Chase Drive/Mangular Avenue Connection Alternative would result in less than significant impacts to the burrowing owl with implementation of Mitigation Measure 5.7-6b. As such, the With Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

As with the proposed Project, the With Chase Drive/Mangular Avenue Connection Alternative would be required to implement Mitigation Measures 5.7-7a through 5.7-7e to reduce urban/wildland interface impacts related to the drainage, night lighting, noise, invasive species, and barriers to less than significant levels. As such, the With Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

In conclusion, as with the proposed Project, the With Chase Drive/Mangular Avenue Connection Alternative would result in less than significant impacts related to biological resources. The With Chase Drive/Mangular Avenue Connection Alternative would result in relatively the same biological resource impacts as the proposed Project; however, this Alternative would result in fewer vegetation impacts.

Cultural Resources

The *Cultural Resources Assessment* indicated that no archaeological resources or paleontological resources were identified within the cultural resources survey area. Potential cultural resource impacts under the With Chase Drive/Mangular Avenue Connection Alternative would be similar to that of the Project alignment; however, the proposed Border Avenue connection would not be built under the With Chase Drive/Mangular Avenue Connection Alternative. Therefore, any cultural resources potentially located in this area would not be impacted. As with the proposed Project, with implementation of Mitigation Measures 5.8-2a through 5.8-3b, impacts on undiscovered archaeological resources and paleontological resources would be reduced to less than significant levels under the With Chase Drive/Mangular Avenue Connection Alternative.

The *Revised Addendum* concludes that, other than the arroyo stone footbridge, no other remaining features retain requisite integrity to be considered eligible for the California Register. The arroyo stone footbridge is a "historical resource" under CEQA and demolition of the footbridge would constitute material impairment under CEQA. As with the proposed the proposed Project, Mitigation Measures 5.8-1a through 5.8-1c would be required to lessen impacts to the historic resource. However, impacts to the historic arroyo stone footbridge would remain significant and unavoidable. As such, both the proposed Project and the With Chase Drive/Mangular Avenue Connection Alternative would result in significant and unavoidable impacts in this regard.

In conclusion, the With Chase Drive/Mangular Avenue Connection Alternative would result in less than significant impacts related to archaeological resources and paleontological resources, and significant and unavoidable impacts related to historic resource. The With Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

Hydrology and Water Quality

Compared to development of the proposed Project, the With Chase Drive/Mangular Avenue Connection Alternative would result in the same short-term impacts to water quality associated with grading, excavation, or construction activities. Therefore, any water quality impacts resulting from roadway runoff would be relatively the same. Implementation of the same mitigation measures would reduce construction-related impacts to a less than significant level.

As with the proposed Project, operation of the proposed alignment would not violate water quality standards or waste discharge requirements. As with the proposed alignment, this Alternative would primarily utilize a variety of structural and non-structural post-construction BMPs to reduce long-term water quality impacts to the Santa Ana River as well as the multiple groundwater basins that serve the area. Similar to the proposed alignment, the With Chase Drive/Mangular Avenue Connection Alternative would be required to incorporate post construction Mitigation Measure 5.9-2 for post construction BMPs to reduce long-term water quality impacts to less than significant levels. As such, the With Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

With regards to groundwater impacts, similar impacts would result from development of the With Chase Drive/Mangular Avenue Connection Alternative compared to development of the proposed Project. As with the proposed Project, development of the With Chase Drive/Mangular Avenue Connection Alternative would not create a substantial demand on water supplies. Additional entitlements or resources regarding groundwater supplies would not be required. Similar to the proposed Project, any water for irrigation purposes would be negligible since landscaping would include native drought tolerant species, consistent with City-approved landscaping themes, and the City would require the Project to use reclaimed water for irrigation. Therefore, the proposed alignment would not deplete groundwater supplies. As such, impacts would be less than significant in this regard and no mitigation would be required. As with the proposed Project, development of the With Chase Drive/Mangular Avenue Connection Alternative would not alter the direction or rate of flow, or substantially deplete the quantity of groundwater resources, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations. The Project site is located within the Santa Ana Watershed, which encompasses 153.2 square miles. According to the Water Quality Assessment, as compared to the size of the watershed, the size of the Project area is insignificant (less than one percent). While the Project would create new impervious area, the impact it generates would be inconsequential when compared to the total watershed area. Existing culverts and control structures that divert and regulate water to the City of Corona Department of Water & Power's recharge ponds would be lengthened and/or relocated if determined necessary during development of final design plans. As with the proposed Project, the With Chase Drive/Mangular Avenue Connection Alternative would result in less than significant impacts related to groundwater recharge, and no mitigation would be required. Therefore, the With Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

As with the proposed Project, the With Chase Drive/Mangular Avenue Connection Alternative would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site. Implementation of the proposed Project is considered a relatively small linear Project within a large watershed, with an increase in impervious area of less than one percent. As indicated in Section 5.9, the proposed Project would increase the impervious area by approximately 21.6 acres; however, the overall impact of this Project on the Santa Ana Watershed is insignificant. Because of the similarity of the With Chase Drive/Mangular Avenue Connection Alternative to the proposed Project, the impacts to the Santa Ana Watershed would be essentially the same. Compared to development of the proposed Project, less impervious area would result under the With Chase Drive/Mangular Avenue Connection Alternative because the Border Avenue connection would not be constructed. However, due to the scope of the With Chase Drive/Mangular Avenue Connection Alternative, in comparison to the size of the Santa Ana Watershed, this reduction in the amount of impervious surface would be insignificant. Furthermore, storm water runoff from the site would drain into concrete lined engineered flood control channels, which controls the discharge from the site and prevents erosion. Additionally, landscaping along the hillside and slope areas would help to prevent erosion. Culverts, channels, and main line storm drains for both on-site and off-site drainage facilities would be designed to accommodate peak flow rates and debris loads; thereby preventing increased flows that would

exceed the capacity of downstream drainage systems. The With Chase Drive/Mangular Avenue Connection Alternative would not cause a hydrologic condition of concern, since runoff from the Project site drains to engineered channel facilities. The increase in runoff volume caused by the With Chase Drive/Mangular Avenue Connection Alternative is insignificant and would not significantly alter the existing drainage pattern of the area resulting in substantial erosion or siltation on-site or in the project vicinity. As with the proposed Project, the With Chase Drive/Mangular Avenue Connection Alternative would result in less than significant impacts in this regard and no mitigation would be required.

As with the proposed Project, the With Chase Drive/Mangular Avenue Connection Alternative would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. As noted above, the increase in runoff volume caused by the proposed Project is insignificant. Storm drainage improvements would be designed to accommodate existing and anticipated future runoff volumes and flow rate. Additionally, detention basins, culverts, channels, main line storm drains, and other runoff conveyance facilities associated with the proposed alignment would have a design capacity adequate to operate under projected runoff and debris loads. As with the proposed Project, storm drain improvements associated with the With Chase Drive/Mangular Avenue Connection Alternative would reduce potential flooding impacts related to stormwater runoff to less than significant level and no mitigation would be required. The With Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

As with the proposed Project, the With Chase Drive/Mangular Avenue Connection Alternative would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. As part the *Hydrology Study* prepared for the proposed Project, sediment calculations were performed for the undeveloped areas tributary (Watersheds A, B, and D through F) to the Project site using the Los Angeles District Debris Method. The *Water Quality Assessment* has determined that no resulting increase in peak discharge to the downstream channels is expected. Proposed culverts, channels, and main line storm drains associated with the proposed alignment for both on-site and off-site drainage facilities would be designed to accommodate peak flow rates and debris loads under this Alternative. These facilities will be analyzed in more detail during the final design process, as part of a subsequent Hydraulic Report. Recommendations in the report would be incorporated into the proposed alignment. With implementation of the recommended Mitigation Measure 5.9-6, the proposed alignment would be designed to result in less than significant impacts to hydrologic conditions. The With Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

As with the proposed Project, the With Chase Drive/Mangular Avenue Connection Alternative would not be subject to inundation by seiche, tsunami, or mudflow. The potential for tsunamis and seiches impacting the proposed roadway alignment is not considered a risk due to the Project site's distance from the Pacific Ocean and the absence of lakes or large bodies of water in the immediate area. . According to the City's *General Plan*, the primary inundation threat to the City of Corona is from Lake

Mathews, which impounds 182,000 acre-feet. Lake Matthews is approximately seven miles southeast of Corona and approximately 13 miles east of the Project site. Failure of either dam would cause flooding along the Temescal Wash in the eastern and northeastern portions of the City. As such, Lake Matthews does not pose a significant flood risk to the Project site. The flow pattern from Prado Dam is westward away from Corona; therefore, Prado Basin and Dam do not pose a significant flood risk to the Project site. The Foothill Parkway extension would cross over the Mabey Canyon Debris Basin. The basin is used for flood control and typically does not retain water year round. The roadway would not result in the redirection of flood flows in a manner that would subsequently lead to the loss of adequate flood conveyance in the City. As with the proposed Project, development under the With Chase Drive/Mangular Avenue Connection Alternative would be subject to the provisions of Title 18 (Flood Plain Management) of the City's *Municipal Code*. The City's *General Plan* includes policies that minimize the potential for flooding to impact property and human life. Additionally, compliance with the City's *Master Drainage Plan* would also reduce the dangers associated with flooding during storm events. As with the proposed Project, the With Chase Drive/Mangular Avenue Connection Alternative would also be required to obtain approval of Mabey Canyon Debris Basin modifications, Kroonen Canyon Channel modifications, and regional storm drain facilities from the Riverside County Flood Control and Water Conservation District. The policies identified in the *General Plan* would minimize the effects of flooding hazards. Similar to the proposed Project, this Alterative would result in less than significant impacts in this regard and no mitigation would be required. The With Chase Drive/Mangular Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

In conclusion, the With Chase Drive/Mangular Avenue Connection Alternative would result in less than significant impacts related to hydrology and water quality. The With Chase Drive/Mangular Avenue Connection Alternative would result in relatively the same impacts as the proposed Project in this regard.

Geologic and Seismic Hazards

Compared to development of the proposed Project, the With Chase Drive/Mangular Avenue Connection Alternative would result in similar soil impacts associated with grading, excavation, or construction activities. Compared with the construction of the proposed alignment, under the With Chase Drive/Mangular Avenue Connection Alternative, geotechnical constraints would be similar because the soil types within the Project site are the same. Grading activities have the potential to result in the exposure of soils to short-term erosion by wind and water. In order to mitigate the potential effects of erosion on-site, temporary and permanent erosion control measures would be required, such as the use of sandbags, hydroseeding, landscaping, and/or soil stabilizers. The Project Contractor would be required to submit a SWPPP, which includes erosion control measures in order to comply with the NPDES requirements of the CWA. Implementation of appropriate grading measures and a Storm Water Pollution Control Plan would reduce the potential impacts to less than significant levels. The With Chase Drive/Mangular Avenue Connection Alternative would result in the same impact as the proposed Project in this regard.

Implementation of the With Chase Drive/Mangular Avenue Connection Alternative has the potential to expose commuters to adverse effects associated with rupture of a known earthquake fault. The proposed Foothill Parkway alignment is located in a seismically active region. Active faults that are part of the Whittier-Elsinore and Chino Fault Zones traverse the Project site. The City's *General Plan* provides goals and policies for the potential geotechnical hazards within the City of Corona (refer to the City's *General Plan* Policies 11.1.2 and 11.1.5 identified above). The goals and policies were established to ensure that development satisfactorily addresses the proper siting, design, and construction of "essential facilities", including their continued functioning in the event of a seismic or other geologic disaster. As with development of the proposed alignment, development under the With Chase Drive/Mangular Avenue Connection Alternative would be required to comply with the UBC, State, County, and City regulations related to seismic hazards. Follow-up field studies during PS&E would confirm that the Project design meets these seismic safety standards, or would recommend engineering techniques to ensure compliance with the most current engineering standards for seismic design. However, this Alternative would not be consistent with the City's *General Plan* Policy 11.1.2. As with the proposed alignment, development of this Alternative with adequate setbacks to avoid fault rupture impacts may not be possible since active faults traverse the Project site. Although this Alternative would be required to implement Mitigation Measure 5.10-2 to reduce fault rupture impacts, significant and unavoidable impacts would occur in this regard. Therefore, the With Chase Drive/Mangular Avenue Connection Alternative would result in the same impact as the proposed Project in this regard.

As noted above, ground shaking on the Project site and vicinity is likely to occur. Local commuters may be exposed to seismic ground shaking if it occurs during the short period of time that they drive on the proposed Foothill Parkway roadway. The With Chase Drive/Mangular Avenue Connection Alternative would be designed and constructed to withstand the magnitude of an earthquake at the surrounding faults. Based on predicted maximum peak ground accelerations at the site and given the soil types identified on-site, ground failure could occur at the Project site. As with development of the proposed Project, development under the With Chase Drive/Mangular Avenue Connection Alternative would be required to comply with the UBC, State, County, and City regulations related to seismic ground shaking. Follow-up field studies during PS&E would confirm that the Project design meets these seismic safety standards, or would recommend engineering techniques to ensure compliance with regulations. Compliance with the UBC, State, County and City regulations related to seismic ground shaking would reduce this potential impact to less than significant levels. The With Chase Drive/Mangular Avenue Connection Alternative would result in the same impact as the proposed Project in this regard.

With regards to liquefaction impacts, the With Chase Drive/Mangular Avenue Connection Alternative would have similar impacts as the proposed Project because the design would traverse the same soil types, which are susceptible to liquefaction. As with development of the proposed Project, development of the With Chase Drive/Mangular Avenue Connection Alternative would traverse a number of large, alluvial-filled canyons including the Wardlow, Mabey, and Hagador Canyons. Additionally, young and old alluvial fan deposits underlie the south portion of the alignment as it enters the Corona Plain. Since alluvial sediments commonly have an unconsolidated nature and can experience shallow groundwater conditions, the

potential for liquefaction is possible within these areas. However, implementation of the proposed alignment would be in conformance with established construction and design parameters set forth in the UBC. The proposed Project is required to comply with the UBC, State, County, and City regulations related to liquefaction. Follow-up field studies during PS&E would confirm that the Project design meets these seismic safety standards, or would recommend engineering techniques to ensure compliance with regulations. Compliance with the UBC, State, County and City regulations related to liquefaction would reduce this potential impact to less than significant levels. The With Chase Drive/Mangular Avenue Connection Alternative would result in the same impact as the proposed Project in this regard.

With regards to potential landslide impacts, neither the proposed Project nor the With Chase Drive/Mangular Avenue Connection Alternative is anticipated to result significant impacts. No existing landslides have been mapped along the proposed alignment area; as such, no landslides would be located within the Project area under the With Chase Drive/Mangular Avenue Connection Alternative. However, the potential exists for heavily sheared and fractured material movement due to the proximity of the alignment to the Whittier-Elsinore Fault Zone. As with the proposed Project, if left untreated, areas of weak materials would have the potential to be subject to movement triggered by strong seismic shaking and, therefore, adverse conditions could occur. However, during the design phase of the With Chase Drive/Mangular Avenue Connection Alternative, areas that are found to contain weak materials would be investigated and thus, remedial grading options would be developed to stabilize materials that are susceptible to seismic landslide movement. Therefore, the potential for seismically induced landslides is less than significant. As such, both the proposed alignment and the With Chase Drive/Mangular Avenue Connection Alternative would result in less than significant impacts related to landslides.

Because the soil types included in the Project area under the With Chase Drive/Mangular Avenue Connection Alternative are the same as soil types as documented for the proposed Project, the With Chase Drive/Mangular Avenue Connection Alternative would have similar impacts with regards to soil expansion and slope stability. There are no known ongoing or planned large-scale extractions of groundwater, gas, oil, or geothermal energy that would cause subsidence in the Project area. Therefore, there is no known hazard related to land subsidence along the proposed Project or associated with the With Chase Drive/Mangular Avenue Connection Alternative.

Construction under both the proposed Project and the With Chase Drive/Mangular Avenue Connection Alternative would include man-made fill, trench-walls, and cut and fill slopes. Bedrock underlies the proposed Project and is considered only slightly compressible; therefore, it is expected to adequately support embankment fills and roadway loads. Man-made fill and alluvium along the alignment are typically compressible and may be collapsible; as a result, these materials may not be suitable for the support of fills and structural loads as they currently exist. The With Chase Drive/Mangular Avenue Connection Alternative would require the same man-made fill, trench-walls, and relatively the same amount of cut and fill slopes as the proposed alignment. During the final design phase and the construction of the With Chase Drive/Mangular Avenue Connection Alternative, soils with the potential to collapse or expand would be identified, evaluated, and mitigated. The With Chase

Drive/Mangular Avenue Connection Alternative would be required to implement the same mitigation measures as the proposed Project, to reduce impacts related to expansive soils to a less than significant level. The With Chase Drive/Mangular Avenue Connection Alternative would result in the same impact as the proposed Project in this regard.

All cut and fill slopes under the With Chase Drive/Mangular Avenue Connection Alternative would incorporate standard practices of the UBC during the design phase and construction to identify any unstable conditions. If unstable conditions are found on-site, the Project Contractor would suggest recommendations for the final design phase of the alignment. In addition, the Project Contractor would suggest recommendations regarding trench-wall stability, which would be provided during the design phase. The With Chase Drive/Mangular Avenue Connection Alternative would be required to implement the same mitigation measures as the proposed Project to reduce impacts associated with unstable slopes and trench-wall stability to a less than significant level. The With Chase Drive/Mangular Avenue Connection Alternative would result in the same impact as the proposed Project in this regard.

In conclusion, as with the proposed Project, the With Chase Drive/Mangular Avenue Connection Alternative would result in less than significant impacts related to soil erosion, ground shaking, liquefaction, landslides, and expansive soils/soil stability. However, this Alternative would result in significant and unavoidable impacts related to fault rupture. The With Chase Drive/Mangular Avenue Connection Alternative would result in relatively the same impacts related to geologic and seismic hazards as the proposed Project.

ABILITY TO MEET PROJECT OBJECTIVES

The With Chase Drive/Mangular Avenue Connection Alternative would result in lesser impacts related to aesthetics, light, and glare; short-term air quality; and biological resources than the proposed Project. The With Chase Drive/Mangular Avenue Connection Alternative would result in relatively the same impact related to land use compatibility and access; consistency with relevant planning; public health and safety; traffic and circulation; noise; cultural resources; hydrology and water quality; and geologic and seismic hazards as the proposed Project. The With Chase Drive/Mangular Avenue Connection Alternative would result in greater impacts related to long-term air quality than the proposed Project. However, as with the proposed Project, impacts can be mitigated to a level of less than significant under the With Chase Drive/Mangular Avenue Connection Alternative, with the exception of aesthetics; short-term air quality; short-term noise; cultural resource impacts; and geologic and seismic impacts.

The With Chase Drive/Mangular Avenue Connection Alternative would attain Objectives 1, 3, 5, and 7 at a lesser level than the proposed Project. The With Chase Drive/Mangular Avenue Connection Alternative would attain Objectives 2, 4, and 6 at the same level as the proposed Project. The With Chase Drive/Mangular Avenue Connection Alternative was rejected because it failed to meet the Project objectives to the same degree as the proposed Project. Additionally, this Alternative was rejected because it failed to avoid significant and unavoidable impacts and therefore would not be a benefit in terms of reduced significant environmental impacts. As

such, the With Chase Drive/Mangular Avenue Connection Alternative would result in the same significant and unavoidable impacts as the proposed Project.

7.3.4 "WITH BORDER AVENUE CONNECTION" ALTERNATIVE

DESCRIPTION OF ALTERNATIVE

The "With Border Avenue Connection" Alternative would result in the construction of the Foothill Parkway westerly extension along the same alignment as described for the proposed Project and only the proposed roadway connection to Border Avenue would be constructed; however, the proposed connection to Chase Drive/Mangular Avenue would not be constructed.

Border Avenue is currently designated as a two-lane undivided collector roadway in the *City of Corona General Plan* Circulation Element. The Project proposes to extend Border Avenue approximately 200 feet south from its existing terminus and connect to Foothill Parkway, approximately 400 feet east of the Mabey Canyon Debris Basin. The proposed Foothill Parkway profile at that location is higher than the existing Border terminus. Therefore, approximately 200 feet of the existing south end of Border Avenue would be reconstructed to accommodate the elevated profile. The proposed typical section includes a 12-foot wide traffic lane and 10-foot wide Class III Bike Lane in each direction, a 7-foot parkway and 5-foot sidewalk on the west side of the street, and an 8-foot parkway on the east side, for a total right of way width of 64 feet. A traffic signal would be placed at the intersection of Border Avenue and Foothill Parkway as part of the connection.

All of the same basic Project components for Foothill Parkway would be constructed. The following discussion evaluates the potential environmental impacts associated with the With Border Avenue Connection Alternative as compared to impacts from the proposed Project.

IMPACT COMPARISON TO THE PROPOSED PROJECT

Specific short-term construction impacts and long-term operational impacts are discussed below for each section included in this EIR.

Land Use and Planning

Implementation of the proposed alignment, as well as the With Border Avenue Connection Alternative, may result in land use compatibility and access impacts to surrounding uses. Although the With Border Avenue Connection Alternative would alter current conditions along the alignment, implementation of design features such as the location of the proposed alignment area, balancing earthwork, providing wildlife linkages, landscaping, and multi-purpose trails would serve to minimize impacts to adjacent uses. As with the proposed Project, potential land use compatibility and access impacts would be mitigated to less than significant levels with implementation of the recommended Mitigation Measures 5.4-1a, 5.4-1b, and 5.4-4 in Section 5.4, TRAFFIC AND CIRCULATION; Mitigation Measures 5.5-1a through 5.5-1d in Section 5.5, AIR QUALITY; and Mitigation Measures 5.6-1a

through 5.6-2 in Section 5.6, NOISE. Therefore, the With Border Avenue Connection Alternative would result in the same impact as the proposed Project.

The westerly extension of Foothill Parkway is identified within the *City of Corona General Plan* as being required to help alleviate congestion on the east/west routes within the City. The proposed westerly extension of Foothill Parkway is consistent with the *City of Corona General Plan* Circulation Element, RCCGP, CFP, RTIP, RTP, and RCPG. Since these planning document are not at the level of specificity that would reflect final design, such as including the connection at Border Avenue or Chase Drive/Mangular Avenue, the With Border Avenue Connection Alternative would still be considered consistent with the City's *General Plan*. Therefore, as with the proposed Project, impacts are considered less than significant in this regard under the With Border Avenue Connection Alternative. As such, the With Border Avenue Connection Alternative would result in the same impact related to relevant planning policies as the proposed Project.

In conclusion, the With Border Avenue Connection Alternative would result in less than significant impacts to land use compatibility and access, and consistency with relevant planning policies. Therefore, the With Border Avenue Connection Alternative would result in the same impact as the proposed Project in this regard.

Aesthetics, Light, and Glare

Similar to the proposed Project, construction of the With Border Avenue Connection Alternative would include the extension of Foothill Parkway; however, the proposed Chase Drive/Mangular Avenue connection would not be built. The aesthetic, light, and glare impacts associated with the With Border Avenue Connection Alternative, although slightly reduced, would be similar to that of the proposed Project.

The With Border Avenue Connection Alternative would result in the same short-term (construction) aesthetic impacts associated with grading, excavation, or construction activities as the proposed alignment. As with the proposed alignment, despite implementation of the recommended Mitigation Measure 5.2-1, significant and unavoidable short-term (construction) aesthetic impacts would occur due to exposure of construction activities to surrounding residential areas for a period of approximately two years. The With Border Avenue Connection Alternative would result in slightly less short-term visual impacts than the proposed Project. However, construction-related visual impacts would remain significant and unavoidable for the With Border Avenue Connection Alternative.

Similar to implementation of the proposed Project, development of the With Border Avenue Connection Alternative would alter westward views to the Santa Ana Mountains. Views to the Santa Ana Mountains are considered a scenic resource within the City of Corona. Although implementation of the With Border Avenue Connection Alternative would reduce visible streetscape in the Project area, impacts would be the same as the proposed Project due to the increased streetscape associated with Foothill Parkway. Impacts to scenic vistas would remain significant and unavoidable.

Similar to the proposed Project, the With Border Avenue Connection Alternative would not impact City or State designated scenic highways. Therefore, no impacts would occur in this regard.

The visual quality at the Project site is defined as primarily rural and suburban. The nature of the area under the With Border Avenue Connection Alternative is similar to the suburban landscape to the northwest, north, and east. However, similar to the Project, the With Border Avenue Connection Alternative would require significant and unavoidable alterations to the existing topography.

Development of the With Border Avenue Connection Alternative would replace open space areas at the northern foothills of the Santa Ana Mountains with a developed streetscape, thus changing the visual quality of the site. Additionally, the With Border Avenue Connection Alternative would require a similar amount of hardscape features (i.e., sound barriers, retaining walls, etc), and impacts in this regard would remain significant and unavoidable. Therefore, similar to the proposed Project, visual impacts to existing visual character/quality would remain significant and unavoidable.

As with the proposed Project, sources of light under the With Border Avenue Connection Alternative would include street lighting and vehicular headlights along Foothill Parkway. However, it is unlikely that traffic signals would be installed along Foothill Parkway at Chase Drive, since the With Border Avenue Connection Alternative does not include the connection to Chase Drive. Although light and glare impacts would be slightly reduced under the With Border Avenue Connection Alternative, as with the proposed Project, street lighting and vehicular headlights from travelers on Foothill Parkway would increase light and glare within the area. Compliance with City of Corona's Street Light Standard (Standard Plan 502-0) and recommended Mitigation Measures 5.2-4a and 5.2-4b would be required to reduce long-term light and glare impacts to less than significant levels.

In conclusion, the With Border Avenue Connection Alternative would result in slightly reduced impacts to aesthetics, light, and glare due to the reduced developed area. However, although the impacts would be slightly reduced, the With Border Avenue Connection Alternative would result in the same significant and unavoidable impacts as the Project. Significant and unavoidable impacts would occur in regard to short-term construction, long-term impacts to scenic vistas, and long-term impacts to existing visual character/quality. Under the With Border Avenue Connection Alternative, impacts to light and glare would be reduced as a result of fewer signalized intersections. Impacts pertaining to light and glare would be reduced to less than significant levels with mitigation, similar to the proposed Project.

Public Health and Safety

Due to the similarity of the With Border Avenue Connection Alternative to the proposed Project, the impacts to public health and safety would be the same. As with the proposed alignment, under the With Border Avenue Connection Alternative, no regulatory sites associated with hazardous waste/materials were reported and no corrective action, restoration, or remediation has been planned, is currently taking place, or has been completed. The proposed alignment has not been under investigation for violation of any environmental laws, regulations, or standards,

however, the physical site inspection revealed that several potential RECs were observed within the immediate vicinity of the Project alignment. Due to the age of the structures within the proposed alignment (prior to the banned use of ACMs and LBPs in 1978), the potential for these materials to be present in building materials is considered likely. As with the proposed alignment, demolition of structures that date pre-1978 could contain result in potential health hazards. In addition, eight regulatory properties associated with subsurface releases of hazardous materials are reported within one-quarter mile of the alignment. A REC caused by one or more of these sites is considered to be low due to the groundwater flow direction, distance, and/or the status of the identified sites. As with the proposed alignment, implementation of recommended Mitigation Measures 5.3-1a through 5.3-1k would be required to ensure potential impacts related to hazardous materials and wastes would be reduced to less than significant levels under the With Border Avenue Connection Alternative. The With Border Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

As with the proposed Project, the With Border Avenue Connection Alternative would not create a significant hazard to the public or the environment from routine transport, use, or disposal of hazardous materials due to the intended use, scope, and nature of the proposed undertaking. As with the proposed Project, the With Border Avenue Connection Alternative would be required to comply with applicable Federal, State, and local regulations to reduce potential impacts to less than significant levels in this regard. The With Border Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

Project construction activities have the potential to create a significant hazard to the public through foreseeable upset and accidental conditions. As with the proposed alignment, the With Border Avenue Connection Alternative would be required to comply with applicable Federal, State, and local regulations and implementation of recommended Mitigation Measures 5.3-3a through 5.3-3d to reduce potential impacts to less than significant levels in this regard. The With Border Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

As with the proposed Project, the With Border Avenue Connection Alternative would not impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. In addition, prior to construction, the Project Contractor shall be required to submit a construction TMP, which will include restrictions on the hours and routes for construction traffic, as well as construction traffic safety measures. As with the proposed alignment, the With Border Avenue Connection Alternative would be required to implement Mitigation Measures 5.4-1a and 5.4-1b in Section 5.4, TRAFFIC AND CIRCULATION, to reduce impacts less than significant levels. The With Border Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

As with the proposed Project, the With Border Avenue Connection Alternative would not expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. The proposed alignment traverses the boundary of the Cleveland National Forest and is within close proximity to an existing brush fire area. Although the proposed extension of Foothill Parkway in and of itself does not pose a fire risk, the final design would be subject to review by the City of Corona Fire Department to ensure that fire regulations are met, such as ensuring adequate brush clearance of flammable vegetation to prevent the spread of fire, the provision of fire hydrants, and adequate roadway design to provide for the efficient movement of fire equipment. Therefore, less than significant impacts are anticipated in this regard. The With Border Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

In conclusion, implementation of the With Border Avenue Connection Alternative would result in less than significant impacts to public health and safety. The With Border Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

Traffic and Circulation

Forecast years 2010 and 2025 under the With Border Avenue Connection Alternative assume improvements to the study roadway segments consistent with the City's *General Plan* Circulation Element. Table 7-9, YEARS 2010 AND 2025 WITH BORDER AVENUE CONNECTION ALTERNATIVE ADT VOLUMES AND LOS, summarizes the 2010 and 2025 ADT capacity, volume, and LOS of the study roadway segments under the With Border Avenue Connection Alternative. Figures 7-9, YEAR 2010 WITH BORDER AVENUE CONNECTION ALTERNATIVE ADT VOLUMES, and 7-10, YEAR 2025 WITH BORDER AVENUE CONNECTION ALTERNATIVE ADT VOLUMES, show forecast years 2010 and 2025 ADT volumes under the With Border Avenue Connection Alternative.

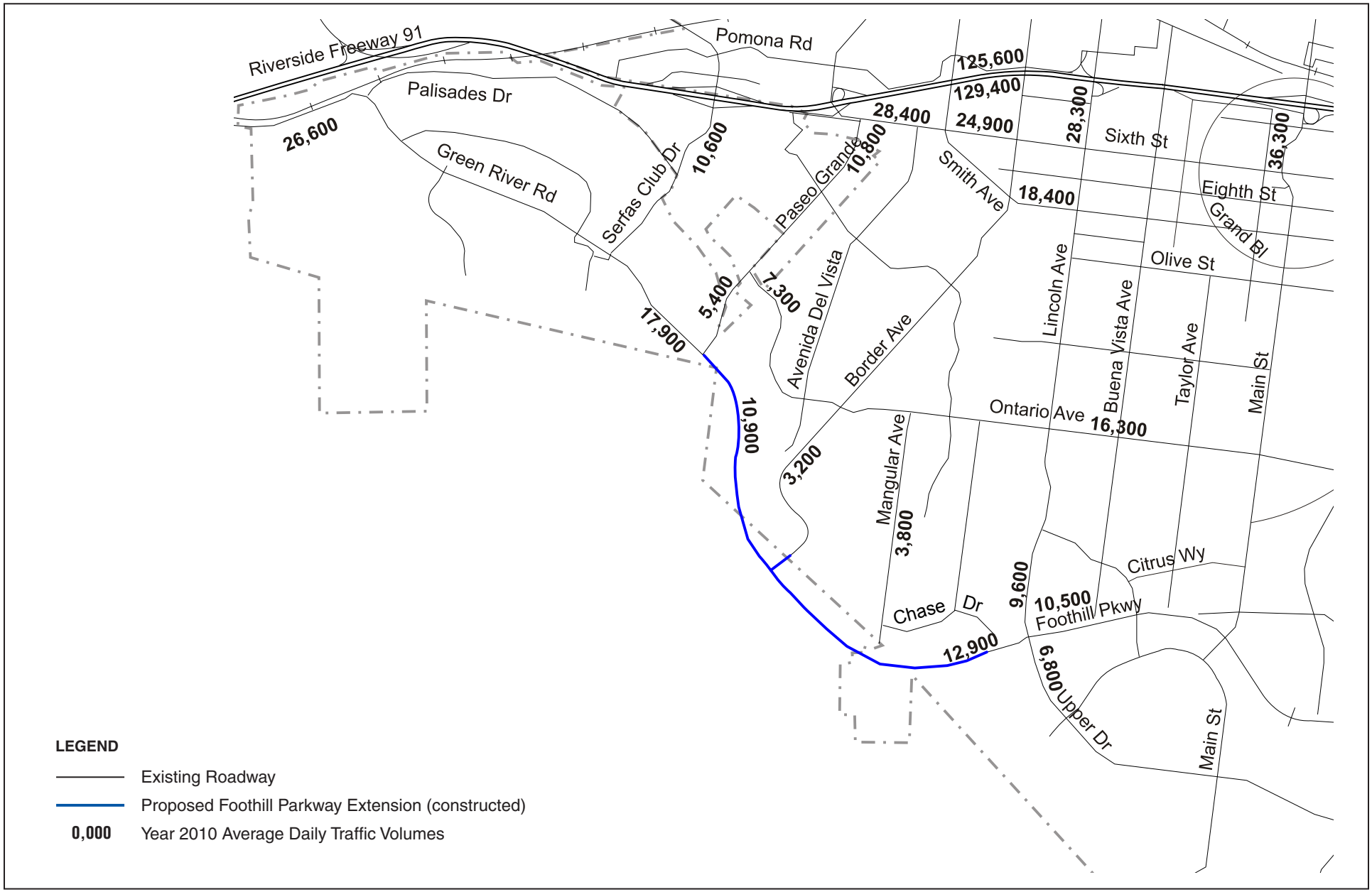
Table 7-9
Years 2010 and 2025 With Border Avenue Connection Alternative
ADT Volumes and LOS

Study Roadway Segment	Capacity (ADT)	2010 Volume (ADT)	2010 V/C – LOS	2025 Volume (ADT)	2025 V/C – LOS
6th St west of Smith Ave	53,900[1]	28,400	0.53 – A	42,700	0.79 – C
10th St west of Lincoln Ave	25,900	18,400	0.71 – C	21,700	0.84 – D
Green River Rd west of Palisades Dr	53,900[1]	26,600	0.49 – A	52,800	**0.98 – E**
Serfas Club Dr south of SR-91	35,900	10,600	0.30 – A	28,700	0.80 – C
Paseo Grande north of Foothill Pkwy	13,000	5,400	0.42 – A	7,500	0.58 – A
Ontario Ave east of Paseo Grande	13,000	7,300	0.56 – A	11,200	0.86 – D
Ontario Ave east of Lincoln Ave	35,900	16,300	0.45 – A	18,700	0.52 – A
Green River Rd west of Paseo Grande	35,900	17,900	0.50 – A	29,000	0.81 – D
Foothill Pkwy east of Paseo Grande	25,900	10,900	0.42 – A	21,600	0.83 – D
Foothill Pkwy east of Lincoln Ave	25,900	10,500	0.41 – A	21,900	0.85 – D
Upper Dr south of Foothill Pkwy	35,900	6,800	0.19 – A	7,900	0.22 – A
Border Ave north of Foothill Pkwy	13,000	3,200	0.25 – A	3,800	0.29 – A
Mangular Ave north of Foothill Pkwy	13,000	3,800	0.29 – A	3,800	0.29 – A
Lincoln Ave north of Foothill Pkwy	35,900	9,600	0.27 – A	9,200	0.26 – A

Notes:
ADT = Average Daily Traffic
LOS = Level of Service
V/C = Volume to Capacity ratio; deficient roadway segment operation shown in **bold**.

[1] ADT capacity reflects programmed improvements to 6th Street (west of Smith Avenue) and Green River Road (west of Palisades), to be completed in 2010.

Source: Meyer, Mohaddes Associates, June 2007.



Source: Meyer, Mohaddes Associates, June 2007.

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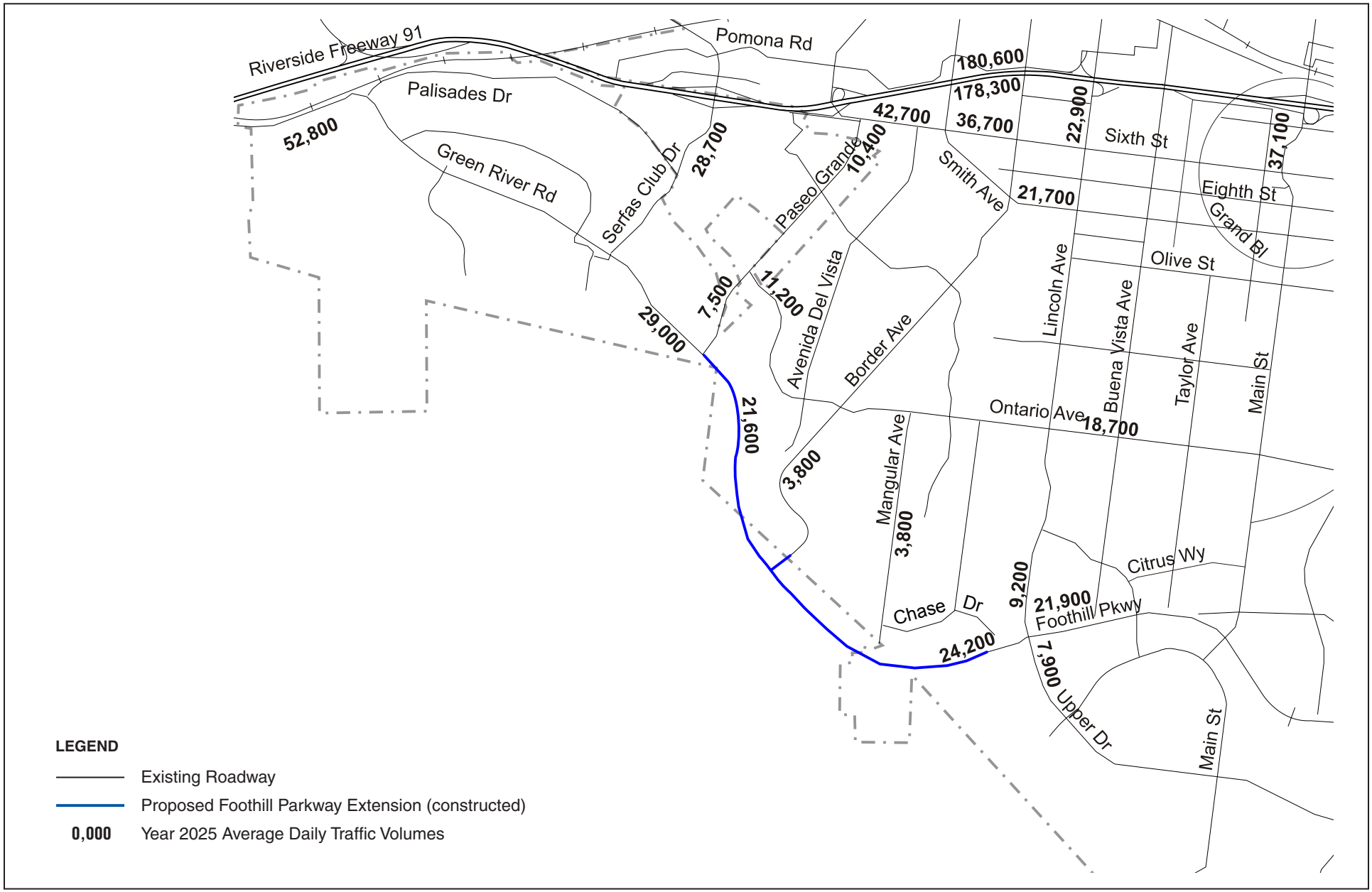
Year 2010 With Border Avenue Connection Alternative ADT Volumes

Figure 7-9



Source: Meyer, Mohaddes Associates, June 2007.

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Year 2025 With Border Avenue Connection Alternative ADT Volumes

Figure 7-10

As shown in Table 7-9, all study roadways are forecast to operate acceptably according to City of Corona performance criteria for forecast year 2010 under the With Border Avenue Connection Alternative. In forecast year 2025, all roadways are expected to operate at LOS D or better, with the exception of the segment of Green River Road west of Palisades Drive, which is expected to operate at LOS E. Due to the roadway geometry and close proximity of this segment to State Route 91, this arterial is considered a critical link of the interchange; therefore, the City of Corona has identified LOS E as acceptable for this heavily traveled freeway interchange, consistent with the City of Corona General Plan Circulation Element Policy 6.1.6. Therefore, all study roadways are forecast to operate acceptably according to City of Corona performance criteria for forecast years 2010 and 2025 for the With Border Avenue Connection Alternative. None of the roadways analyzed exceed their capacity for forecast years 2010 and 2025 under the With Border Avenue Connection Alternative.

Compared to the No Project conditions, traffic volumes along Green River Road, Foothill Parkway, Upper Drive, and Border Avenue, increased and volumes along 6th Street, 10th Street, Serfas Club Drive, Paseo Grande, Ontario Avenue, and Lincoln Avenue decreased in year 2010 under the With Border Avenue Connection Alternative due to the redistribution of traffic. Similar to the No Project conditions in year 2010, traffic volumes along Mangular Avenue would remain unchanged under the With Border Avenue Connection Alternative. Compared to the No Project conditions for year 2010, traffic volumes under the With Border Avenue Connection Alternative would increase by approximately 200 vehicles per day along Border Avenue, which translates to a percentage growth of approximately seven percent.

Compared to the No Project conditions for forecast year 2025 conditions, the traffic volumes along Green River Road, Foothill Parkway, Upper Drive, and Border Avenue increased and volumes along 6th Street, 10th Street, Serfas Club Drive, Paseo Grande, Ontario Avenue, and Lincoln Avenue decreased. Similar to the No Project conditions in year 2025, traffic volumes along Mangular Avenue would remain unchanged under the With Border Avenue Connection Alternative. Compared to the No Project conditions for year 2025, traffic volumes under the With Border Avenue Connection Alternative would increase by 800 vehicles per day along Border Avenue, which translates to a percentage growth of approximately 27 percent.

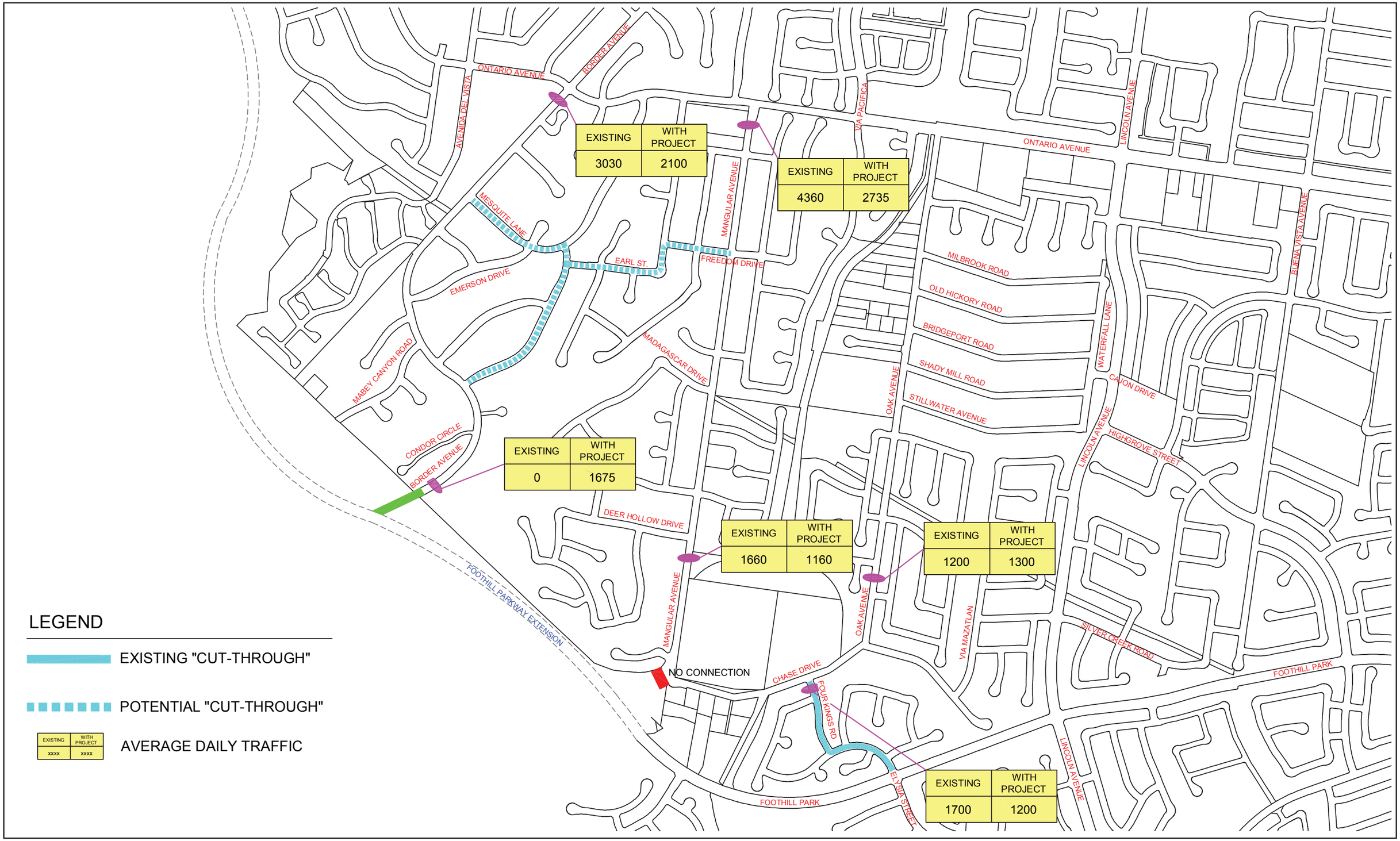
Compared to the proposed Project, the traffic volumes along Paseo Grande, Ontario Avenue (east of Lincoln Avenue), and Border Avenue increased and traffic volumes along Foothill Parkway (east of Paseo Grande), and Mangular Avenue decreased in Year 2010 under the With Border Avenue Connection Alternative due to the redistribution of traffic. Traffic volumes along 6th Street, 10th Street, Serfas Club Drive, Green River Road, Ontario Avenue (east of Paseo Grande), Foothill Parkway (east of Lincoln Avenue), Upper Drive, and Lincoln Avenue would remain unchanged in year 2010 under the With Border Avenue Connection Alternative. Compared to the proposed alignment conditions for year 2010, traffic volumes under the With Border Avenue Connection Alternative would be reduced by approximately 200 vehicles per day along Mangular Avenue and increased by 100 vehicles per day along Border Avenue. This represents an approximate five percent reduction in traffic volume along Mangular Avenue and an approximate three percent increase along Border Avenue.

Compared to the proposed Project for year 2025, the traffic volumes along Paseo Grande, Ontario Avenue (east of Paseo Grande), Border Avenue and Lincoln Avenue increased, and traffic volumes along Ontario Avenue (east of Lincoln Avenue), Foothill Parkway (east of Paseo Grande), and Mangular Avenue decreased under the With Border Avenue Connection Alternative due to the redistribution of traffic. Traffic volumes along 6th Street, 10th Street, Green River Road, Serfas Club Drive, Foothill Parkway (east of Lincoln Avenue), and Upper Drive would remain unchanged in year 2025 under the With Border Avenue Connection Alternative. Compared to the proposed alignment conditions for year 2025, traffic volumes under the With Border Avenue Connection Alternative would be reduced by approximately 700 vehicles per day along Mangular Avenue and increased by 200 vehicles per day along Border Avenue. This represents a five percent reduction in traffic volume along Mangular Avenue and an approximately 16 percent increase along Border Avenue.

Based on the City's focused neighborhood study, without the connection at Chase Drive/Mangular Avenue, the traffic volumes on Four Kings Road will decrease relative to existing conditions, but by a lesser amount than the decreases found in the With Chase Drive/Mangular Avenue Connection alternative and the proposed Project. Traffic volumes along Mangular Avenue are expected to decrease along the entire length of the roadway, due to traffic cutting through adjacent neighborhoods to Foothill Parkway via Four Kings Road to Elysia and Freedom Drive to Border Avenue. With the connection at Border, traffic volumes on Border Avenue will increase at the south end. Near Ontario Avenue, however, volumes on Border Avenue are expected to decrease, similarly to the proposed Project. With only one connection to Foothill Parkway, cut through will likely occur between Border Avenue and Mangular Avenue through a residential neighborhood via Mesquite Lane, Peacock Lane, Earl Street, Patriot Way, and Freedom Drive. Figure 7-11, Year 2010 FOCUSED NEIGHBORHOOD TRAFFIC WITH BORDER AVENUE CONNECTION ALTERNATIVE, shows the focused neighborhood study results for the With Border Avenue Connection Alternative.

The current layout of fire station locations within the City was planned based on the City's *General Plan* Circulation Element, which assumes that the extension of Foothill Parkway and connections to Border Avenue and Chase Drive will be constructed. The With Border Avenue Connection Alternative would not connect proposed Foothill Parkway to Chase Drive/Mangular Avenue. Without this connection, emergency response times to the neighborhoods adjacent to this local roadway may be longer than in the Project condition.

The With Border Avenue Connection Alternative would operate similarly to the proposed Project. However, without the proposed Chase Drive/Mangular Avenue connection to Foothill Parkway, a difference in the traffic distribution on the local road network would occur under the With Border Avenue Connection Alternative, as access to the Project site would be available only from Green River Road, future Border Avenue connection, and the existing terminus of Foothill Parkway. Despite differences in anticipated traffic volumes between the proposed Project and the With Border Avenue Connection Alternative, all study area roadways are expected to operate within the same level of service for forecast years 2010 and 2025.



Source: City of Corona Traffic Engineering Department, 6/13/07.

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Year 2010 Focused Neighborhood Traffic with Border Ave. Connection Alternative

Figure 7-11

Back of 11 x 17 page

In conclusion, in both forecast years 2010 and 2025, all of the roadways under the With Border Avenue Connection Alternative are expected to operate at the same level of service as the proposed Project, and are within the City of Corona performance criteria. Without the proposed connection at Chase Drive/Mangular Avenue, emergency response time may be longer for a portion of the community than in the proposed Project. However, the With Border Avenue Connection Alternative would result in less than significant impacts, similar to the proposed Project.

Air Quality

As only one connection is proposed, the With Border Avenue Connection Alternative would not operate as efficiently as the proposed Project. The proposed Chase Drive/Mangular Avenue connection, which would serve as an additional access point to the proposed Foothill Parkway Extension, would not be available. Similar to the development of the proposed Project, significant and unavoidable short-term (construction) emission impacts would occur under the With Border Avenue Connection Alternative. Compared to development of the proposed Project, short-term (construction) emission impacts would be slightly reduced because the proposed Chase Drive/Mangular Avenue connection would not be constructed. Therefore construction impacts associated with this connection would not occur. Similar to the proposed Project, implementation of Mitigation Measures 5.5-1a through 5.5-1d would reduce short-term (construction) emission impacts; however, due to the amount of grading required, impacts would remain significant and unavoidable under the With Border Avenue Connection Alternative.

With regards to long-term (operational) air quality impacts, the With Border Avenue Connection Alternative would not improve air quality or traffic/circulation to the same degree as the proposed Project. Less traffic would be redistributed along other roadways within the area, which could potentially increase vehicle queuing and idling times at surrounding roadway intersections. Increased idling and vehicle queuing could result in higher concentrations of CO; however, an exceedance of State or Federal CO standards is not anticipated. As with the proposed alignment, this alternative would result in less than significant long-term (operational) air quality impacts.

In conclusion, the With Border Avenue Connection Alternative would result in significant unavoidable short-term (construction) emission impacts and less than significant long-term (operational) air quality impacts. The With Border Avenue Connection Alternative would have slightly less short-term (construction) emission air quality impacts and greater long-term (operational) impacts than the proposed Project.

Noise

The With Border Avenue Connection Alternative shares the same horizontal and vertical alignment as the proposed Project, with the exception of the proposed Chase Drive/Mangular Avenue Connection. Therefore, potential short-term construction and long-term operational (traffic) noise impacts associated with the With Border Avenue Connection Alternative would be relatively similar.

Noise generated from construction crews and the transportation of construction equipment and materials to the Project site would result in a temporary increase in ambient noise levels in the Project vicinity. The With Border Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard. However, as with the proposed Project, operation of construction equipment for the development of the With Border Avenue Connection Alternative would result in substantial (exceeding noise standards) temporary and periodic increases of the ambient noise levels in the Project vicinity above existing conditions, due to grading and construction activities. Therefore, short-term construction noise impacts would be significant and unavoidable. As such, the With Border Avenue Connection Alternative would result in the same short-term construction noise impacts as the proposed Project.

The *Noise Impact Analysis* evaluated long-term operational (traffic) impacts under the With Border Avenue Connection Alternative (refer to Table 7-10, YEAR 2025 WITH BORDER AVENUE ALTERNATIVE TRAFFIC NOISE LEVELS, for noise levels).

Table 7-10
Year 2025 With Border Avenue Alternative Traffic Noise Levels

Receptor Number	Location	Existing Noise Level[1] (dBA CNEL)	No Project (dBA CNEL)	Proposed Alignment (dBA CNEL)	"Border Avenue Connection" Alternative (dBA CNEL)
R-1	San Antonio Drive	**66**[2]	**68**	**66**	**66**
R-2	San Antonio Drive	**66**	**68**	65	65
R-3	San Antonio Drive	**68**	**69**	65	**65**
R-4	San Rafael Drive	**73**	**74**	**71**	**71**[2]
R-5	San Rafael Drive	**73**	**74**	**71**	**71**[2]
R-6	San Rafael Drive	**73**	**74**	**71**	**71**[2]
R-7	Adobe Avenue	57	58	60	60
R-8	Adobe Avenue	56	57	62	61
R-9	Adobe Avenue	53	55	64	64
R-10	Adobe Avenue	51	52	64	64
R-11	Adobe Avenue	48	49	64	63
R-12	Adobe Avenue	52	53	58	57
R-13	Adobe Avenue	51	53	58	58
R-14	Adobe Avenue	50	52	58	58
R-15	Adobe Avenue	48	50	60	59
R-16	Adobe Avenue	49	50	59	59
R-17	Adobe Avenue	48	49	58	57
R-18	Adobe Avenue	43	45	58	58
R-19	Adobe Avenue	44	46	56	55
R-20	Adobe Avenue	44	46	54	54
R-21	Adobe Avenue	44	45	**53**	52
R-22	Avenida Del Vista	48	49	**56**	56
R-23	Avenida Del Vista	47	48	**54**	54

Table 7-10 (Continued)
Year 2025 With Border Avenue Alternative Traffic Noise Levels

Receptor Number	Location	Existing Noise Level[1] (dBA CNEL)	No Project (dBA CNEL)	Proposed Alignment (dBA CNEL)	"Border Avenue Connection" Alternative (dBA CNEL)
R-24	Avenida Del Vista	46	47	**53**	53
R-25	Avenida Del Vista	45	47	52	51
R-26	Avenida Del Vista	42	44	60	60
R-27	Avenida Del Vista	37	38	59	59
R-28	Avenida Del Vista	35	37	58	58
R-29	Avenida Del Vista	36	38	60	60
R-30	Avenida Del Vista	40	42	61	61
R-31	Avenida Del Vista	34	35	58	58
R-32	Avenida Del Vista	35	36	59	59
R-33	Avenida Del Vista	35	36	60	59
R-34	Avenida Del Vista	35	36	59	59
R-35	Avenida Del Vista	37	39	60	60
R-36	Avenida Del Vista	38	40	61	61
R-37	Chisholm Trail Circle	37	39	63	62
R-38	Chisholm Trail Circle	38	39	62	62
R-39	Chisholm Trail Circle	38	39	60	59
R-40	Chisholm Trail Circle	37	39	57	57
R-41	Chisholm Trail Circle	38	39	57	56
R-42	Chisholm Trail Circle	37	38	57	57
R-43	Vixen Trail Circle	38	39	61	61
R-44	Vixen Trail Circle	38	39	59	58
R-45	Vixen Trail Circle	38	39	57	57
R-46	Vixen Trail Circle	38	39	56	56
R-47	Vixen Trail Circle	37	38	57	57
R-48	Raven Circle	36	36	56	56
R-49	Raven Circle	36	37	55	55
R-50	Raven Circle	38	38	57	57
R-51	Raven Circle	39	39	55	55
R-52	Falcon Circle	37	37	60	60
R-53	Falcon Circle	38	39	59	59
R-54	Falcon Circle	40	40	57	57
R-55	Condor Circle	41	41	63	63
R-56	Condor Circle	42	42	61	60

Table 7-10 (Continued)
Year 2025 With Border Avenue Alternative Traffic Noise Levels

Receptor Number	Location	Existing Noise Level[1] (dBA CNEL)	No Project (dBA CNEL)	Proposed Alignment (dBA CNEL)	"Border Avenue Connection" Alternative (dBA CNEL)
R-57	Condor Circle	51	52	65	65
R-58	Condor Circle	49	49	61	61
R-59	Condor Circle	48	48	58	58
R-60	Condor Circle	53	53	59	59
R-61	Condor Circle	60	60	63	64
R-62	Condor Circle	57	57	59	60
R-63	Eagle Circle	55	55	57	57
R-64	Cape Drive	46	47	52	52
R-65	Cape Drive	48	48	53	53
R-66	Cape Drive	46	46	53	53
R-67	Cape Drive	45	45	52	52
R-68	Cape Drive	44	44	51	51
R-69	Cape Drive	43	43	51	51
R-70	Bonnyview Circle	43	44	53	53
R-71	Bonnyview Circle	43	43	53	53
R-72	Bonnyview Circle	42	42	54	54
R-73	Bonnyview Circle	41	42	55	55
R-74	Bonnyview Circle	40	41	55	55
R-75	Clearview Circle	40	41	64	64
R-76	Clearview Circle	40	41	61	61
R-77	Clearview Circle	42	43	60	60
R-78	Clearview Circle	40	40	62	62
R-79	Clearview Circle	41	41	60	59
R-80	Clearview Circle	42	43	58	58
R-81	Meadowcrest Way	40	41	61	61
R-82	Meadowcrest Way	42	43	61	61
R-83	Meadowcrest Way	45	45	64	59
R-84	Meadowcrest Way	49	49	64	57
R-85	Meadowcrest Way	52	52	62	57
R-86	Meadowcrest Way	45	46	58	57
R-87	Meadowcrest Way	49	49	57	56
R-88	Meadowcrest Way	57	57	59	58
R-89	Mangular Avenue	54	54	57	56
R-90	Mangular Avenue	46	47	61	60
R-91	Mangular Avenue	48	50	63	63
R-92	Chase Drive	46	47	57	56
R-93	Chase Drive	45	46	55	55
R-94	Foothill Parkway	38	40	58	58

Table 7-10 (Continued)
Year 2025 With Border Avenue Alternative Traffic Noise Levels

Receptor Number	Location	Existing Noise Level[1] (dBA CNEL)	No Project (dBA CNEL)	Proposed Alignment (dBA CNEL)	"Border Avenue Connection" Alternative (dBA CNEL)
R-95	Foothill Parkway	44	45	63	63
R-96	Folson Circle	44	47	56	56
R-97	Folson Circle	46	49	58	58
R-98	Folson Circle	53	55	**67**	67
R-99	Folson Circle	52	55	62	62
R-100	Folson Circle	49	52	59	59
R-101	Fanning Circle	55	58	63	63
R-102	Fanning Circle	63	65	**71**	71
R-103	Fanning Circle	61	63	**68**	68
R-104	Fanning Circle	54	57	62	62
R-105	Corbett Road	50	53	58	58
R-106	Corbett Road	49	51	57	57
R-107	Chase Drive	55	56	64	64
R-108	Skyline Drive	54	56	63	63
R-109	Amethyst Street	53	54	61	61
R-110	Amethyst Street	48	50	56	56
R-111	Amethyst Street	47	49	56	56
R-112	Amethyst Street	46	49	55	55
R-113	Amethyst Street	50	51	58	58
R-114	Amethyst Street	48	50	57	57
R-115	Elysia Street	51	52	59	59
R-116	Elysia Street	51	52	60	60
R-117	Elysia Street	53	54	61	61
R-118	Elysia Street	52	54	61	61
R-119	Bonsai Circle	55	57	63	64
R-120	Bonsai Circle	55	57	64	64
R-121	Bonsai Circle	56	57	64	64
R-122	Duxbury Circle	53	56	62	62
R-123	Duxbury Circle	57	60	65	65
R-124	Duxbury Circle	52	53	60	60
R-125	Duxbury Circle	52	54	61	61
R-126	Duxbury Circle	53	55	62	62
R-127	Duxbury Circle	54	56	63	63
R-128	Greenvale Circle	49	50	57	57
R-129	Greenvale Circle	47	49	55	55
R-130	Langtree Lane	48	50	56	56
R-131	Langtree Lane	48	49	55	55
R-132	Langtree Lane	48	50	55	55

Table 7-10 (Continued)
Year 2025 With Border Avenue Alternative Traffic Noise Levels

Receptor Number	Location	Existing Noise Level[1] (dBA CNEL)	No Project (dBA CNEL)	Proposed Alignment (dBA CNEL)	"Border Avenue Connection" Alternative (dBA CNEL)
R-133	Langtree Lane	48	49	**54**	54
R-134	Stoneyberry Lane	48	49	**52**	52
R-135	Athlone Lane	59	61	**68**	**68**
R-136	Athlone Lane	59	60	**67**	**67**
R-137	Athlone Lane	58	59	**66**	**66**
R-138	Athlone Lane	62	64	**70**	**70**
R-139	Athlone Lane	61	63	**69**	**69**
R-140	Athlone Lane	58	60	65	66
R-141	Chase Drive	56	58	65	65
R-142	Chase Drive	61	63	**68**	**68**
R-143	Chase Drive	59	61	65	65
R-144	Brunstane Circle	60	62	65	65
R-145	Brunstane Circle	64	65	**69**	**69**
R-146	Brunstane Circle	63	64	**68**	**68**
R-147	Brunstane Circle	65	**66**	**68**	**68**
R-148	Brunstane Circle	65	**66**	**66**	**66**
R-149	Brunstane Circle	61	62	64	64
R-150	Brunstane Circle	63	64	64	64

Notes:

dBA = A-weighted decibel scale
CNEL = Community Noise Equivalent Level

* All numbers in bold represent noise levels that exceed the City's exterior noise standards of 65 dBA CNEL.

[1] At locations with low vehicular traffic, ambient noise level measurements were used to establish existing noise levels at modeled receptor locations.
[2] Due to the reduction in average daily traffic (ADT) along Paseo Grande noise levels at this location would be reduced.
[3] Due to the reduction in ADT along Paseo Grande, noise levels at this location would be reduced.
[4] Due to the reduction in ADT along Paseo Grande noise levels at this location would be reduced.

Source: *Noise Impact Analysis: Foothill Parkway Westerly Extension*, LSA Associates, Inc., January 2008.

As shown in Table 7-10 above, the following 18 receptor locations, out of 150 modeled receptors, would be exposed to noise levels that exceed the 65 dBA CNEL for year 2025 under the With Border Avenue Connection Alternative. Compared to the proposed Project, the With Border Avenue Connection Alternative would exceed the noise standard for one more receptor location than the proposed Project.

- **R-1 and R-4 through R-6,** these receptor locations represent existing residences located at San Antonio Drive and San Rafael Drive that have outdoor active use areas exposed to traffic noise on Green River Road and Paseo Grande. These receptors would not experience a Project-related noise increase of 3 dBA or more. Currently, no existing walls reduce noise levels for

these residences. Traffic noise levels at these receptor locations are contributed by other roadways in the Project area, such as Green River Road and Paseo Grande, and the Project traffic would not contribute significantly to these receptors. Therefore, no sound barriers were evaluated to mitigate noise impacts to these residences.

- **R-98,** this receptor location represents an existing residence located at Folson Circle that has outdoor active use areas exposed to traffic noise on Foothill Parkway. This receptor location would experience a Project-related noise increase of 3dBA or more. No existing sound barriers were assumed for this residence. One sound barrier was modeled and recommended

- **R-102 and R-103,** these receptor locations represent existing residences located at Fanning Circle that have outdoor active use areas exposed to traffic noise along the proposed Foothill Parkway. These receptors would experience a Project-related noise increase of 3 dBA or more. No existing barriers were assumed for these residences. One sound barrier was modeled and recommended as mitigation to reduce noise impacts to these residences.

- **R-135 through R-140, R-142, R-145, and R-146,** these receptor locations represent existing residences located at Athlone Lane, Chase Drive, and Brunstane Circle that have outdoor active use areas exposed to traffic noise on Foothill Parkway. These receptors would experience a Project-related noise increase of 3 dBA or more. An existing wall 6 ft in height along the residential property line currently reduces noise levels for these residences. One sound barrier was modeled and recommended as mitigation to reduce noise impacts to these residences.

- **R-147,** this receptor location represents an existing residence located at Brunstane Circle that has outdoor active use areas exposed to traffic noise on the existing Foothill Parkway. This receptor would not experience a Project-related noise increase of 3 dBA or more under the With Chase Drive/Mangular Avenue Connection. Therefore, no sound barriers were evaluated to mitigate noise impacts to these residences.

- **R-148,** this receptor location represents an existing residence located at Brunstane Circle that has outdoor active use areas exposed to traffic noise on the existing Foothill Parkway and Lincoln Avenue. This receptor would not experience a Project-related noise increase of 3 dBA or more. The traffic noise level at this receptor location is contributed by other roadways in the Project area, such as Lincoln Avenue, and the Project traffic would not contribute significantly to this receptor. Therefore, no sound barriers were evaluated to minimize noise impacts to this residence.

The following sound barriers were analyzed and recommended for mitigation to minimize impacts to the sensitive receptor locations that would experience a Project-related noise increase of three dBA or more and would be exposed to a traffic noise level exceeding the City's exterior noise standard of 65 dBA CNEL under the With Border Avenue Connection Alternative:

- **Sound Barrier 1,** is located along the proposed Foothill Parkway along the residential property line to minimize noise impacts to receptor R-98. A minimum barrier height of 6 feet would reduce traffic noise levels to 65 dBA CNEL or below.

- **Sound Barrier 2,** is located along the proposed Foothill Parkway along the residential property line to minimize noise impacts to receptors R-102 and R-103. A minimum barrier height of 6 feet would reduce traffic noise levels to 65 dBA CNEL or below. It should be noted that a perimeter wall already exists in this current location. Prior to issuance of grading permits, the existing wall's acoustical barrier efficiency shall be tested to ensure it meets the requirements to reduce noise levels below 65 dBA.

- **Sound Barrier 3,** is located along the proposed Foothill Parkway along the residential property line to minimize noise impacts to receptors R-135 through R-140, R-142, R-145, and R-146. A minimum barrier height of 8 to 10 feet would reduce traffic noise levels to 65 dBA CNEL or below.

No sound barriers were analyzed for sensitive receptors that would not be exposed to a traffic noise level exceeding 65 dBA CNEL or that would experience an increase in Project-related noise levels less than 3 dBA.

Under the With Border Avenue Connection Alternative, with the incorporation of recommended Mitigation Measure 5.6-2 (Sound Barriers 1 through 3) long-term operational traffic noise impacts would be reduced below the City's noise exterior standards of 65 dBA CNEL. The With Border Avenue Connection Alternative would require the same mitigation as the proposed Project in order to reduce impacts to less than significant impact in this regard. Long-term operational traffic noise impacts under the With Border Avenue Connection Alternative would be the same as the proposed Project in this regard.

In conclusion, as with the proposed Project, the With Border Avenue Connection Alternative would result in significant and unavoidable short-term construction noise impacts and less than significant long-term operational (traffic) impacts. The With Border Avenue Connection Alternative would result in the same short-term construction noise impacts and the same long-term operational (traffic) noise impacts, as mitigated, as the Proposed Project

Biological Resources

Compared to development of the proposed Project, the With Border Avenue Connection Alternative would result in similar short-term impacts to biological resources associated with grading, excavation, and construction activities. These impacts could include increased runoff that may affect water quality, increased lighting that would affect the behavior patterns of nocturnal and crepuscular (active at dawn and dusk) wildlife, increased dust accumulation on surrounding vegetation, impacts on nesting birds/raptors, increased fire danger, and spread of exotic species. As with development of the proposed Project, the With Border Avenue Connection Alternative would be required to implement Mitigation Measure 5.5-1a (i.e. standard dust suppression) in Section 5.5, AIR QUALITY to reduce construction-related dust generation. Therefore, the indirect effect of impairing respiration of existing plant

species on the Project site is considered less than significant. As with development of the proposed Project, the With Border Avenue Connection Alternative would be required to implement of Mitigation Measures 5.7-1a through 5.7-1c to reduce short-term construction related impacts to biological resources to less than significant. As such, the With Border Avenue Connection Alternative would result in the same impacts as the proposed Alternative in this regard.

Vegetation impacts under the With Border Avenue Connection Alternative would be less than the proposed Project. Native and non-native vegetation impacts associated with the proposed Project are illustrated in Figure 5.7-5 in Section 5.7, VEGETATION IMPACTS. A summary of vegetation impacts under the proposed Project and this Alternative are described in Table 7-11, WITH BORDER AVENUE CONNECTION ALTERNATIVE VEGETATION IMPACTS.

Table 7-11
With Border Avenue Connection Alternative Vegetation Impacts

Vegetation Type	Proposed Project (Acres)	"With Border Avenue Connection" Alternative (Acres)	Difference
Coastal Sage Scrub	**7.25**	**7.10**	**-0.15**
Coastal Sage Scrub/Chaparral	14.02	14.02	0.00
Coastal Sage Scrub/Ruderal	0.15	0.15	0.00
California Buckwheat-Scalebroom Alluvial Scrub	**2.42**	**2.39**	**-0.03**
Chaparral	22.84	22.84	0.00
Non-native Grassland	1.76	1.76	0.00
Fremont Cottonwood-Willow Riparian Woodland	0.40	0.40	0.00
Willow Riparian Woodland	0.25	0.25	0.00
Western Sycamore-Coast Live Oak Alluvial Scrub	0.97	0.97	0.00
Coast Live Oak Woodland	5.06	5.06	0.00
Mule Fat Scrub	0.78	0.78	0.00
Mule Fat Scrub-Willow Riparian Woodland	0.00	0.00	0.00
Ruderal	4.81	4.81	0.00
Ornamental	**2.20**	**1.22**	**-0.98**
Ornamental/Developed	**1.97**	**0.69**	**-1.28**
Disturbed	**3.96**	**3.07**	**-0.89**
Developed/Ruderal	7.31	7.31	0.00
Developed	3.25	3.25	0.00
Total	**79.40**	**76.07**	**-3.33**

Note: Vegetation types and numbers in **bold** represent vegetation impacts that differ from the proposed Project.

Source: BonTerra Consulting, Amber Oneal, Senior Project Manager/Ecologist, electronic communication, July 17, 2008.

Development of the proposed Project would impact approximately 79.40 acres of native and non-native vegetation types. The With Border Avenue Connection Alternative would impact 76.07 acres of native and non-native vegetation types.

The With Border Avenue Connection Alternative would impact the same vegetation acreage as the proposed Project for five vegetation types, as indicated in Table 7-11. Similar to the proposed Project, compliance with relevant measures from the Western Riverside MSHCP and recommended Mitigation Measures 5.7-2a and 5.7-2b would reduce impacts to a less than significant level in this regard. As such, the With Border Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

The With Border Avenue Connection Alternative would result in fewer impacts than the proposed Project on coastal sage scrub by 0.15 acres, California buckwheat-scalebroom alluvial scrub by 0.03 acres, ornamental by 0.98 acres, ornamental/development by 1.28 acres, and distributed by 0.89 acres. Coastal sage scrub vegetation is proposed for conservation within the MSHCP Criteria Area; however, the Project site is not located within the Criteria Area. Impacts on these vegetation types are considered adverse but mitigated by the City of Corona's participation in the MSHCP. Therefore, as with the proposed Project, this Alternative would result in less than significant impacts in this regard and no mitigation would be required. California buckwheat-scalebroom alluvial scrub is classified as riparian vegetation. Impacts on riparian vegetation would be considered significant. Although the removal of riparian habitat is considered a significant impact, recommended Mitigation Measures 5.7-2a and 5.7-2b would be considered biologically equivalent or superior. Mitigation Measure 5.7-2a requires restoration of riparian habitat at no less than a 2:1 ratio to ensure no net loss of riparian habitat. Mitigation Measures 5.7-2a and 5.7-2b require replacement of native trees within the riparian habitat at the following ratios: coast live oaks 4:1; sycamore 3:1; cottonwood 3:1; willow 2:1; and scrub oak 2:1. As with the proposed Project, this Alternative would be required to implement Mitigation Measures 5.7-2a and 5.7-2b to reduce impacts to less than significant in this regard. As this Alternative would result in fewer impacts than the proposed alignment to California buckwheat-scalebroom alluvial scrub, less mitigation would be required under this Alternative. Ornamental, ornamental/development, and distributed vegetation generally have low biological value because they are composed of unvegetated areas or are vegetated with non-native species. These areas generally provide limited habitat for native plant and wildlife species, although they may occasionally be used by native species. Therefore, impacts on ornamental, ornamental/development, and distributed vegetation would not be considered significant. Therefore, as with the proposed Project, this Alternative would result in less than significant impacts in this regard and no mitigation would be required.

Impacts on local travel routes under the With Border Avenue Connection Alternative would be similar to the proposed Project. As with the proposed Project, the With Border Avenue Connection Alternative would remove local travel routes within the direct impact area. However, few native habitat areas would be located northeast of the Project site. Therefore, this Alternative would not be expected to substantially impact wildlife movement along local travel routes. In addition, there are several local travel routes remaining to the southwest of the Project site. As with the proposed Project, the With Border Avenue Connection Alternative would result in less than

significant impacts on local wildlife movement and no mitigation would be required. As such, the With Border Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

Impacts on regional wildlife movement under the With Border Avenue Connection Alternative would be similar to the proposed Project. The With Border Avenue Connection Alternative would adversely affect regional wildlife movement along a segment of Wardlow Wash. Fresno Canyon, located 1.5 miles west of the Project site, was identified for preservation by the MSHCP to maintain the linkage between the Cleveland National Forest and the Santa Ana River/Prado Basin while Wardlow Wash has not been identified for long-term preservation. Thus, although Wardlow Wash functions as a regional wildlife corridor between the Cleveland National Forest and the Santa Ana River/Prado Basin and impacts on wildlife movement along Wardlow Wash are considered significant, the impact is considered mitigated by the City of Corona's participation in the MSHCP. Therefore, as with the proposed Project, the With Border Avenue Connection Alternative would result in less than significant impacts in this regard and no mitigation would be required. However, it is recommended that the base of the manufactured slope of the road be vegetated with native species to retain potential for some wildlife movement in Wardlow Wash (refer to Mitigation Measure 5.7-4). In addition, it is recommended that the culvert conveying water from Wardlow Wash under Paseo Grande remain large enough to allow for continued movement of wildlife species. The existing 8-foot culvert is sufficient for movement of medium-sized wildlife. Recreational trails, access roads, and wildlife movement have been considered in the design of two multi-purpose trails as part of the proposed alignment and this Alternative would also incorporate the proposed trails.

No special status plant species are located within the proposed Chase Drive/Mangular Avenue connection and all on-site special status plants are located along the Foothill Parkway. As such, impacts to special status plants would be the same under the With Border Avenue Connection Alternative as the proposed Project. As with the proposed alignment, the With Border Avenue Connection Alternative would be required to implement Mitigation Measure 5.7-5 to would reduce impacts on intermediate mariposa lily and Coulter's matilija poppy to less than significant levels.

As with the proposed Project, the With Border Avenue Connection Alternative would be required to implement Mitigation Measures 5.7-7a through 5.7-7e to reduce urban/wildland interface impacts related to the drainage, night lighting, noise, invasive species, and barriers to less than significant levels. As such, the With Border Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

In conclusion, the With Border Avenue Connection Alternative would result in less than significant impacts related to biological resources. The With Border Avenue Connection Alternative would result in relatively the same biological resource impacts as the proposed Project; however, this Alternative would result in fewer vegetation impacts. Additionally, this Alternative would require less mitigation than the proposed Project.

Cultural Resources

The Cultural Resources Assessment indicated that no archaeological resources or paleontological resources were identified within the cultural resources survey area. Potential cultural resource impacts under the With Border Avenue Connection Alternative would be similar to that of the Project alignment; however, the proposed Chase Drive/Mangular Avenue connection would not be built under the With Border Avenue Connection Alternative. Therefore, any cultural resources potentially located in this area would not be impacted. As with the proposed Project, with implementation of Mitigation Measures 5.8-2a through 5.8-2b impacts on undiscovered archaeological resources and paleontological resources would be reduced to less than significant levels under the With Border Avenue Connection Alternative.

The Revised Addendum concludes that, other than the arroyo stone footbridge, no other remaining features retain requisite integrity to be considered eligible for the California Register. The arroyo stone footbridge is a "historical resource" under CEQA and demolition of the footbridge would constitute material impairment under CEQA. As with the proposed the proposed Project, Mitigation Measures 5.8-1a through 5.8-1c would be required to lessen impacts to the historic resource. However, impacts to the historic arroyo stone footbridge would remain significant and unavoidable. As such, both the proposed Project and the With Border Avenue Connection Alternative would result in significant and unavoidable impacts in this regard.

In conclusion, the With Border Avenue Connection Alternative would result in less than significant impacts related to archaeological resources and paleontological resources, and significant and unavoidable impacts related to historic resources. The With Border Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

Hydrology and Water Quality

Compared to development of the proposed Project, the With Border Avenue Connection Alternative would result in the same short-term impacts to water quality associated with grading, excavation, or construction activities. Therefore, any water quality impacts resulting from roadway runoff would be relatively the same. Implementation of the same mitigation measures would reduce construction-related impacts to a less than significant level.

As with the proposed Project, operation of the proposed alignment would not violate water quality standards or waste discharge requirements. As with the proposed alignment, this Alternative would primarily utilize a variety of structural and non-structural post-construction BMPs to reduce long-term water quality impacts to the Santa Ana River as well as the multiple groundwater basins that serve the area. Similar to the proposed alignment, the With Border Avenue Connection Alternative would be required to incorporate post construction Mitigation Measure 5.9-2 for post construction BMPs to reduce long-term water quality impacts to less than significant levels. As such, the With Border Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

With regards to groundwater impacts, similar impacts would result from development of the With Border Avenue Connection Alternative compared to development of the proposed Project. As with the proposed Project, development of the With Border Avenue Connection Alternative would not create a substantial demand on water supplies. Additional entitlements or resources regarding groundwater supplies would not be required. Similar to the proposed Project, any water for irrigation purposes would be negligible since landscaping would include native drought tolerant species, consistent with City-approved landscaping themes, and the City would require the Project to use reclaimed water for irrigation. Therefore, the proposed alignment would not deplete groundwater supplies. As such, impacts would be less than significant in this regard and no mitigation would be required. The Border Avenue Connection Alternative would not alter the direction or rate of flow, or substantially deplete the quantity of groundwater resources, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations. As noted above, the Project site is located within the Santa Ana Watershed, which encompasses 153.2 square miles. According to the *Water Quality Assessment*, as compared to the size of the watershed, the size of the Project area is insignificant (less than one percent). While the Project would create new impervious area, the impact it generates would be inconsequential when compared to the total watershed area. Existing culverts and control structures that divert and regulate water to the City of Corona Department of Water & Power's recharge ponds would be lengthened and/or relocated if determined necessary during development of final design plans. As with the proposed Project, the With Border Avenue Connection Alternative would result in less than significant impacts related to groundwater recharge, and no mitigation would be required. Therefore, the With Border Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

As with the proposed Project, the With Border Avenue Connection Alternative would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site. Implementation of the proposed Project is considered a relatively small linear Project within a large watershed, with an increase in impervious area of less than one percent. As indicated in Section 5.9, the proposed Project would increase the impervious area by approximately 21.6 acres; however, the overall impact of this Project on the Santa Ana Watershed is insignificant. Because of the similarity of the With Border Avenue Connection Alternative to the proposed Project, the impacts to the Santa Ana Watershed would be essentially the same. Compared to development of the proposed Project, less impervious area would result under the With Border Avenue Connection Alternative because the Chase Drive/Mangular Avenue connection would not be constructed. However, due to the scope of the With Border Avenue Connection Alternative, in comparison to the size of the Santa Ana Watershed, this reduction in the amount of impervious surface would be insignificant. Furthermore, storm water runoff from the site would drain into concrete lined engineered flood control channels, which controls the discharge from the site and prevents erosion. Additionally, landscaping along the hillside and slope areas would help to prevent erosion. Culverts, channels, and main line storm drains for both on-site and off-site drainage facilities would be designed to accommodate peak flow rates and debris loads; thereby preventing increased flows that would exceed the capacity of downstream drainage systems. The With Border Avenue Connection Alternative would not cause a hydrologic condition of concern, since runoff from the Project site

drains to engineered channel facilities. The increase in runoff volume caused by the With Border Avenue Connection Alternative is insignificant and would not significantly alter the existing drainage pattern of the area resulting in substantial erosion or siltation on-site or in the project vicinity. As with the proposed Project, the With Border Avenue Connection Alternative would result in less than significant impacts in this regard and no mitigation would be required.

As with the proposed Project, the With Border Avenue Connection Alternative would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. As noted above, the increase in runoff volume caused by the proposed Project is insignificant. Storm drainage improvements would be designed to accommodate existing and anticipated future runoff volumes and flow rate. Additionally, detention basins, culverts, channels, main line storm drains, and other runoff conveyance facilities associated with the proposed alignment would have a design capacity adequate to operate under projected runoff and debris loads. As with the proposed Project, storm drain improvements associated with the With Border Avenue Connection Alternative would reduce potential flooding impacts related to stormwater runoff to less than significant level and no mitigation would be required. The With Border Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

As with the proposed Project, the With Border Avenue Connection Alternative would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. As part the Hydrology Study prepared for the proposed Project, sediment calculations were performed for the undeveloped areas tributary (Watersheds A, B, and D through F) to the Project site using the Los Angeles District Debris Method. The *Water Quality Assessment* has determined that no resulting increase in peak discharge to the downstream channels is expected. Proposed culverts, channels, and main line storm drains associated with the proposed alignment for both on-site and off-site drainage facilities would be designed to accommodate peak flow rates and debris loads under this Alternative. These facilities will be analyzed in more detail during the final design process, as part of a subsequent Hydraulic Report. Recommendations in the report would be incorporated into the proposed alignment. With implementation of the recommended Mitigation Measure 5.9-6, the proposed alignment would be designed to result in less than significant impacts to hydrologic conditions. The With Border Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

As with the proposed Project, the With Border Avenue Connection Alternative would not be subject to inundation by seiche, tsunami, or mudflow. The potential for tsunamis and seiches impacting the proposed roadway alignment is not considered a risk due to the Project site's distance from the Pacific Ocean and the absence of lakes or large bodies of water in the immediate area. According to the City's *General Plan*, the primary inundation threat to the City of Corona is from Lake Mathews, which impounds 182,000 acre-feet. Lake Matthews is approximately seven miles southeast of Corona and approximately 13 miles east of the Project site. Failure of either dam would cause flooding along the Temescal Wash in the eastern and northeastern portions of the City. As such, Lake Matthews does not pose a

significant flood risk to the Project site. The flow pattern from Prado Dam is westward away from Corona; therefore, Prado Basin and Dam do not pose a significant flood risk to the Project site. The Foothill Parkway extension would cross over the Mabey Canyon Debris Basin. The basin is used for flood control and typically does not retain water year round. The roadway would not result in the redirection of flood flows in a manner that would subsequently lead to the loss of adequate flood conveyance in the City. As with the proposed Project, development under the With Border Avenue Connection Alternative would be subject to the provisions of Title 18 (Flood Plain Management) of the City's *Municipal Code*. The City's *General Plan* includes policies that minimize the potential for flooding to impact property and human life. Additionally, compliance with the City's *Master Drainage Plan* would also reduce the dangers associated with flooding during storm events. As with the proposed Project, the With Border Avenue Connection Alternative would also be required to obtain approval of Mabey Canyon Debris Basin modifications, Kroonen Canyon Channel modifications, and regional storm drain facilities from the Riverside County Flood Control and Water Conservation District. The policies identified in the General Plan would minimize the effects of flooding hazards. Similar to the proposed Project, this Alterative would result in less than significant impacts in this regard and no mitigation would be required. The With Border Avenue Connection Alternative would result in the same impacts as the proposed Project in this regard.

In conclusion, the With Border Avenue Connection Alternative would result in less than significant impacts related to hydrology and water quality. The With Border Avenue Connection Alternative would result in relatively the same impacts as the proposed Project in this regard.

Geologic and Seismic Hazards

Compared to development of the proposed Project, the With Border Avenue Connection Alternative would result in similar soil impacts associated with grading, excavation, or construction activities. Compared with the construction of the proposed alignment, under the With Border Avenue Connection Alternative geotechnical constraints would be similar because the soil types within the Project site are the same. Grading activities have the potential to result in the exposure of soils to short-term erosion by wind and water. In order to mitigate the potential effects of erosion on-site, temporary and permanent erosion control measures would be required, such as the use of sandbags, hydroseeding, landscaping, and/or soil stabilizers. The Project Contractor would be required to submit a SWPPP, which includes erosion control measures in order to comply with the NPDES requirements of the CWA. Implementation of appropriate grading measures and a Storm Water Pollution Control Plan would reduce the potential impacts to less than significant levels. The With Border Avenue Connection Alternative would result in the same impact as the proposed Project in this regard.

Implementation of the With Border Avenue Connection Alternative has the potential to expose commuters to adverse effects associated with rupture of a known earthquake fault. The proposed Foothill Parkway alignment is located in a seismically active region. Active faults that are part of the Whittier-Elsinore and Chino Fault Zones traverse the Project site. The City's *General Plan* provides goals and policies for the potential geotechnical hazards within the City of Corona (refer to the City's *General Plan* Policies 11.1.2 and 11.1.5 identified above). The goals and

policies were established to ensure that development satisfactorily addresses the proper siting, design, and construction of "essential facilities", including their continued functioning in the event of a seismic or other geologic disaster. As with development of the proposed alignment, development under the With Border Avenue Connection Alternative would be required to comply with the UBC, State, County, and City regulations related to seismic hazards. Follow-up field studies during PS&E would confirm that the Project design meets these seismic safety standards, or would recommend engineering techniques to ensure compliance with the most current engineering standards for seismic design. However, this Alternative would not be consistent with the City's *General Plan* Policy 11.1.2. As with the proposed alignment, development of this Alternative with adequate setbacks to avoid fault rupture impacts may not be possible since active faults traverse the Project site. Although this Alternative would be required to implement Mitigation Measure 5.10-2 to reduce fault rupture impacts, significant and unavoidable impacts would occur in this regard. Therefore, the With Border Avenue Connection Alternative would result in the same impact as the proposed Project in this regard.

As noted above, ground shaking on the Project site and vicinity is likely to occur. Local commuters may be exposed to seismic ground shaking if it occurs during the short period of time that they drive on the proposed Foothill Parkway roadway. The With Border Avenue Connection Alternative would be designed and constructed to withstand the magnitude of an earthquake at the surrounding faults. Based on predicted maximum peak ground accelerations at the site and given the soil types identified on-site, ground failure could occur at the Project site. As with development of the proposed Project, development under the With Border Avenue Connection Alternative would be required to comply with the UBC, State, County, and City regulations related to seismic ground shaking. Follow-up field studies during PS&E would confirm that the Project design meets these seismic safety standards, or would recommend engineering techniques to ensure compliance with regulations. Compliance with the UBC, State, County and City regulations related to seismic ground shaking would reduce this potential impact to less than significant levels. The With Border Avenue Connection Alternative would result in the same impact as the proposed Project in this regard.

With regards to liquefaction impacts, the With Border Avenue Connection Alternative would have similar impacts as the proposed Project because the design would traverse the same soil types, which are susceptible to liquefaction. As with development of the proposed Project, development of the With Border Avenue Connection Alternative would traverse a number of large, alluvial-filled canyons including the Wardlow, Mabey, and Hagador Canyons. Additionally, young and old alluvial fan deposits underlie the south portion of the alignment as it enters the Corona Plain. Since alluvial sediments commonly have an unconsolidated nature and can experience shallow groundwater conditions, the potential for liquefaction is possible within these areas. However, implementation of the proposed alignment would be in conformance with established construction and design parameters set forth in the UBC. The proposed Project is required to comply with the UBC, State, County, and City regulations related to liquefaction. Follow-up field studies during PS&E would confirm that the Project design meets these seismic safety standards, or would recommend engineering techniques to ensure compliance with regulations. Compliance with the UBC, State, County and City regulations related to liquefaction would reduce this potential impact to less than significant levels. The With Border

Avenue Connection Alternative would result in the same impact as the proposed Project in this regard.

With regards to potential landslide impacts, neither the proposed Project nor the With Border Avenue Connection Alternative is anticipated to result significant impacts. No existing landslides have been mapped along the proposed alignment area; as such, no landslides would be located within the Project area under the With Border Avenue Connection Alternative. However, the potential exists for heavily sheared and fractured material movement due to the proximity of the alignment to the Whittier-Elsinore Fault Zone. As with the proposed Project, if left untreated, areas of weak materials would have the potential to be subject to movement triggered by strong seismic shaking and, therefore, adverse conditions could occur. However, during the design phase of the With Border Avenue Connection Alternative, areas that are found to contain weak materials would be investigated and thus, remedial grading options would be developed to stabilize materials that are susceptible to seismic landslide movement. Therefore, the potential for seismically induced landslides is less than significant. As such, both the proposed alignment and the With Border Avenue Connection Alternative would result in less than significant impacts related to landslides.

Because the soil types included in the Project area under the With Border Avenue Connection Alternative are the same as soil types as documented for the proposed Project, the With Border Avenue Connection Alternative would have similar impacts with regards to soil expansion and slope stability. There are no known ongoing or planned large-scale extractions of groundwater, gas, oil, or geothermal energy that would cause subsidence in the Project area. Therefore, there is no known hazard related to land subsidence along the proposed Project or associated with the With Border Avenue Connection Alternative.

Construction under both the proposed Project and the With Border Avenue Connection Alternative would include man-made fill, trench-walls, and cut and fill slopes. Bedrock underlies the proposed Project and is considered only slightly compressible; therefore, it is expected to adequately support embankment fills and roadway loads. Man-made fill and alluvium along the alignment are typically compressible and may be collapsible; as a result, these materials may not be suitable for the support of fills and structural loads as they currently exist. The With Border Avenue Connection Alternative would require the same man-made fill, trench-walls, and relatively the same amount of cut and fill slopes as the proposed alignment. During the final design phase and the construction of the With Border Avenue Connection Alternative, soils with the potential to collapse or expand would be identified, evaluated, and mitigated. The With Border Avenue Connection Alternative would be required to implement the same mitigation measures as the proposed Project, to reduce impacts related to expansive soils to a less than significant level. The With Border Avenue Connection Alternative would result in the same impact as the proposed Project in this regard.

All cut and fill slopes under the With Border Avenue Connection Alternative would incorporate standard practices of the UBC during the design phase and construction to identify any unstable conditions. If unstable conditions are found on-site, the Project Contractor would suggest recommendations for the final design phase of the alignment. In addition, the Project Contractor would suggest recommendations

regarding trench-wall stability, which would be provided during the design phase. The With Border Avenue Connection Alternative would be required to implement the same mitigation measures as the proposed Project, to reduce impacts associated with unstable slopes and trench-wall stability to a less than significant level. The With Border Avenue Connection Alternative would result in the same impact as the proposed Project in this regard.

In conclusion, as with the proposed Project, the With Border Avenue Connection Alternative would result in less than significant impacts related to soil erosion, ground shaking, liquefaction, landslides, and expansive soils/soil stability. However, this Alternative would result in significant and unavoidable impacts related to fault rupture. The With Border Avenue Connection Alternative would result in relatively the same impacts related to geologic and seismic hazards as the proposed Project.

ABILITY TO MEET PROJECT OBJECTIVES

The With Border Avenue Connection Alternative would result in lesser impacts related to aesthetics, light, and glare; short-term air quality; and biological resources than the proposed Project. The With Border Avenue Connection Alternative would result in relatively the same impacts related to land use compatibility and access; consistency with relevant planning; public health and safety; traffic and circulation; noise; cultural resources; hydrology and water quality; and geologic and seismic hazards as the proposed Project. The With Border Avenue Connection Alternative results in greater impacts related to long-term air quality than the proposed Project. However, as with the proposed Project, impacts can be mitigated to a level of less than significant under the With Border Avenue Connection Alternative, with the exception of aesthetic; short-term air quality; noise; cultural resource; and geologic and seismic hazards impacts.

The With Border Avenue Connection Alternative would attain Objectives 1, 3, 5, and 7 at a lesser level than the proposed Project. The With Border Avenue Connection Alternative would attain Objectives 2, 4, and 6 at the same level as the proposed Project. The With Border Avenue Connection Alternative was rejected because it would not meet all the Project objectives to the same degree as the proposed Project. Additionally, this Alternative was rejected because it failed to avoid significant and unavoidable impacts and therefore would not be a benefit in terms of reduced significant environmental impacts. As such, the With Border Avenue Connection Alternative would result in the same significant and unavoidable impacts as the proposed Project.

7.3.5 "REDUCED WIDTH" ALTERNATIVE

DESCRIPTION OF ALTERNATIVE

The "Reduced Width" Alternative would result in the construction of the Foothill Parkway Westerly Extension as a two-lane roadway along the same alignment as described for the proposed Project. With one lane of travel in each direction, rather than two, this would allow for a reduced roadway width relative to the proposed Project. The proposed roadway connections at Border Avenue and Chase Drive would be constructed, as with the proposed Project.

All of the same basic Project components for Foothill Parkway would be constructed. The horizontal and vertical alignments for the Reduced Width Alternative would be the same as for the proposed Project; therefore, the roadway grades for the Reduced Width Alternative would vary from 1.8 percent to 9 percent. Roadway width from hinge to hinge would vary in width from 83 feet to 94 feet in width, with an actual roadway width ranging from 50 to 54 feet. Similar to the proposed Project, the reduced width is through Wardlow Wash. This would be accomplished by the use of a 10-foot wide median. A 14-ft wide median is proposed for the remainder of the extension, from Border Avenue to the existing Foothill Parkway. For the Reduced Width Alternative, two travel lanes with one in each direction, would be provided, with 7-foot wide parkways, a 5-foot wide sidewalk on the north side of the roadway, and a 10- to 14-foot wide multipurpose trail on the south side. Travel lane widths would be 12 feet, with an 8-foot wide Class II Bike Lane. Striping would be modified through the superelevated 700-foot-radius curve to accommodate street runoff that will drain toward the median. In this specific location, the travel lane would be 13 feet wide, and the Class II Bike Lane would be 7 feet wide. The overall roadway width would not change. As Foothill Parkway passes over the Mabey Canyon Debris Basin dam, the sidewalk and roadside multi-purpose trail would be located behind the curb, eliminating the 7-foot wide parkway. The trail width would be reduced to 5 feet, and a maintenance access road would be placed adjacent to the south for access to the Mabey Canyon Debris Basin.

The following discussion evaluates the potential environmental impacts associated with the Reduced Width Alternative as compared to impacts from the proposed Project.

IMPACT COMPARISON TO THE PROPOSED PROJECT

Specific short-term construction impacts and long-term operational impacts are discussed below for each section included in this EIR.

Land Use and Planning

Implementation of the proposed alignment, as well as the Reduced Width Alternative, may result in land use compatibility and access impacts to surrounding uses. Although the Reduced Width Alternative would alter current conditions along the alignment, implementation of design features such as the location of the proposed alignment area, balancing earthwork, providing wildlife linkages, landscaping, and multi-purpose trails would serve to minimize impacts to adjacent uses. As with the proposed Project, potential land use compatibility and access impacts would be mitigated to less than significant levels with implementation of the recommended Mitigation Measures 5.4-1a, 5.4-1b, and 5.4-4 in Section 5.4, TRAFFIC AND CIRCULATION; Mitigation Measures 5.5-1a through 5.5-1d in Section 5.5, AIR QUALITY; and Mitigation Measures 5.6-1a through 5.6-2 in Section 5.6, NOISE. Therefore, the Reduced Width Alternative would result in the same impact as the proposed Project.

The proposed Foothill Parkway Westerly Extension is planned to be constructed as a four-lane divided roadway, consistent with the *City of Corona General Plan* Circulation Element, which identifies the roadway as a Secondary Four-lane Arterial

roadway. Additionally, the proposed westerly extension of Foothill Parkway is consistent with the ultimate buildout of the *City of Corona General Plan* Circulation Element, RCCGP, CFP, RTIP, RTP, and RCPG. However, the Reduced Width Alternative proposes a two-lane roadway, which is not consistent with the ultimate buildout of the City's *General Plan* Circulation Element. Therefore, the Reduced Width Alternative would result in a greater impact than the proposed Project in this regard.

In conclusion, less than significant impacts to land use compatibility and access would occur under the Reduced Width Alternative. The Reduced Width Alternative would result in the same impact related to land use compatibility and access as the proposed Project. However, the Reduced Width Alternative would not be consistent with the ultimate buildout of the City's *General Plan*. Therefore, the Reduced Width Alternative would result in a greater impact related to consistency with relevant planning policies than the proposed Project.

Aesthetics, Light, and Glare

Similar to the proposed Project, construction of the Reduced Width Alternative would include the extension of Foothill Parkway with connections to Border Avenue and Chase Drive/Mangular Avenue, along the same alignment as described for the proposed Project. However, Foothill Parkway would be reduced from four lanes to two lanes. Compared to the proposed Project, the Reduced Width Alternative would require approximately eight percent less grading than the proposed Project. The aesthetic, light, and glare impacts associated with the Reduced Width Alternative, although slightly reduced, would be similar to that of the proposed Project.

Although the grading would be less with the Reduced Width Alternative than the proposed Project, short-term (construction) aesthetic impacts associated with grading, excavation, or construction activities would be the same as the proposed alignment. As with the proposed alignment, despite implementation of the recommended Mitigation Measure 5.2-1, significant and unavoidable short-term (construction) aesthetic impacts would occur due to exposure of construction activities to surrounding residential areas for a period of approximately two years. The Reduced Width Alternative would result in slightly less short-term aesthetic impacts than the proposed Project. However, construction-related aesthetic impacts would remain significant and unavoidable for the Reduced Width Alternative.

Similar to implementation of the proposed Project, development of the Reduced Width Alternative would alter westward views to the Santa Ana Mountains. Views to the Santa Ana Mountains are considered a scenic resource within the City of Corona. Although implementation of the Reduced Width Alternative would reduce visible streetscape in the Project area, impacts would be the same as the proposed Project due to the introduction of streetscape to the area. Impacts to scenic vistas would remain significant and unavoidable.

Similar to the proposed Project, the Reduced Width Alternative would not impact City or State designated scenic highways. Therefore, no impacts would occur in this regard.

The visual quality at the Project site is defined as primarily rural and suburban. The nature of the area under the Reduced Width Alternative is similar to the suburban landscape to the northwest, north, and east. However, similar to the proposed Project, the Reduced Width Alternative would require significant and unavoidable alterations to the existing topography.

Development of the Reduced Width Alternative would replace open space areas at the northern foothills of the Santa Ana Mountains with a developed streetscape, thus changing the visual quality of the site. Additionally, the Reduced Width Alternative would require a similar amount of hardscape features (i.e., sound barriers, retaining walls, etc), and impacts in this regard would remain significant and unavoidable. Therefore, similar to the proposed Project, impacts to existing visual character/quality would remain significant and unavoidable.

As with the proposed Project, sources of light under the Reduced Width Alternative would include street lighting, vehicular headlights, and traffic signals, into the area. Headlights from travelers along Foothill Parkway, as well as new traffic signals, would increase light and glare within the area. However, due to the reduced roadway width, this impact would be slightly less than the proposed Project. Similar to the proposed Project, compliance with City of Corona's Street Light Standard (Standard Plan 502-0) and recommended Mitigation Measures 5.2-4a and 5.2-4b would be required to reduce long-term light and glare impacts to less than significant levels.

In conclusion, the Reduced Width Alternative would result in slightly reduced impacts to aesthetics, light, and glare due to the reduced developed area. However, although the impacts would be slightly reduced, the Reduced Width Alternative would result in the same significant and unavoidable impacts as the Project. Significant and unavoidable impacts would occur in regard to short-term construction, long-term impacts to scenic vistas, and long-term impacts to existing character/quality. Under the Reduced Width Alternative, impacts to light and glare would be less than the proposed Project due to the reduced roadway width. Impacts pertaining to light and glare would be reduced to less than significant levels with mitigation, similar to the proposed Project.

Public Health and Safety

Due to the similarity of the Reduced Width Alternative to the proposed Project, the impacts to public health and safety would be the same. As with the proposed alignment, under the Reduced Width Alternative, no regulatory sites associated with hazardous waste/materials were reported and no corrective action, restoration, or remediation has been planned, is currently taking place, or has been completed. The proposed alignment has not been under investigation for violation of any environmental laws, regulations, or standards, however, the physical site inspection revealed that several potential RECs were observed within the immediate vicinity of the Project alignment. Due to the age of the structures within the proposed alignment (prior to the banned use of ACMs and LBPs in 1978), the potential for these materials to be present in building materials is considered likely. As with the proposed alignment, demolition of structures that date pre-1978 could contain result in potential health hazards. In addition, eight regulatory properties associated with subsurface releases of hazardous materials are reported within one-quarter mile of

the alignment. A REC caused by one or more of these sites is considered to be low due to the groundwater flow direction, distance, and/or the status of the identified sites. As with the proposed alignment, implementation of recommended Mitigation Measures 5.3-1a through 5.3-1k would be required to ensure potential impacts related to hazardous materials and wastes would be reduced to less than significant levels under the Reduced Width Alternative. The Reduced Width Alternative would result in the same impacts as the proposed Project in this regard.

As with the proposed Project, the Reduced Width Alternative would not create a significant hazard to the public or the environment from routine transport, use, or disposal of hazardous materials due to the intended use, scope, and nature of the proposed undertaking. As with the proposed Project, the Reduced Width Alternative would be required to comply with applicable Federal, State, and local regulations to reduce potential impacts to less than significant levels in this regard. The Reduced Width Alternative would result in the same impacts as the proposed Project in this regard.

Project construction activities have the potential to create a significant hazard to the public through foreseeable upset and accidental conditions. As with the proposed alignment, the Reduced Width Alternative would be required to comply with Federal, State, and applicable local regulations and implementation of recommended Mitigation Measures 5.3-3a through 5.3-3d to reduce potential impacts to less than significant levels in this regard. The Reduced Width Alternative would result in the same impacts as the proposed Project in this regard.

As with the proposed Project, the Reduced Width Alternative would not impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Prior to construction, the Project Contractor shall be required to submit a construction TMP, which will include restrictions on the hours and routes for construction traffic, as well as construction traffic safety measures. As with the proposed alignment, the Reduced Width Alternative would be required to implement Mitigation Measures 5.4-1a and 5.4-1b in Section 5.4, TRAFFIC AND CIRCULATION, to reduce impacts less than significant levels. The Reduced Width Alternative would result in the same impacts as the proposed Project in this regard.

As with the proposed Project, the Reduced Width Alternative would not expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. The proposed alignment traverses the boundary of the Cleveland National Forest and is within close proximity to an existing brush fire area. Although the proposed extension of Foothill Parkway in and of itself does not pose a fire risk, the final design would be subject to review by the City of Corona Fire Department to ensure that fire regulations are met, such as ensuring adequate brush clearance of flammable vegetation to prevent the spread of fire, the provision of fire hydrants, and adequate roadway design to provide for the efficient movement of fire equipment. Therefore, less than significant impacts are anticipated in this regard. The Reduced Width Alternative would result in the same impacts as the proposed Project in this regard.

The Reduced Width Alternative would result in the same impacts to public health and safety as the proposed Project. In conclusion, implementation of the Reduced Width Alternative would result in less than significant impacts in this regard.

Traffic and Circulation

Forecast years 2010 and 2025 under the Reduced Width Alternative assume improvements to the study roadway segments consistent with the City's *General Plan* Circulation Element, with the exception of the extension of Foothill Parkway, which would be constructed as a two-lane roadway, rather than a four-lane roadway, under the Reduced Width Alternative. Table 7-12, YEARS 2010 AND 2025 REDUCED WIDTH ALTERNATIVE ADT VOLUMES AND LOS, summarizes the 2010 and 2025 ADT capacity, volume, and LOS of the study roadway segments under the Reduced Width Alternative. Figures 7-12, YEAR 2010 REDUCED WIDTH ALTERNATIVE ADT VOLUMES, and 7-13, YEAR 2025 REDUCED WIDTH ALTERNATIVE ADT VOLUMES, show forecast years 2010 and 2025 ADT volumes under the Reduced Width Alternative.

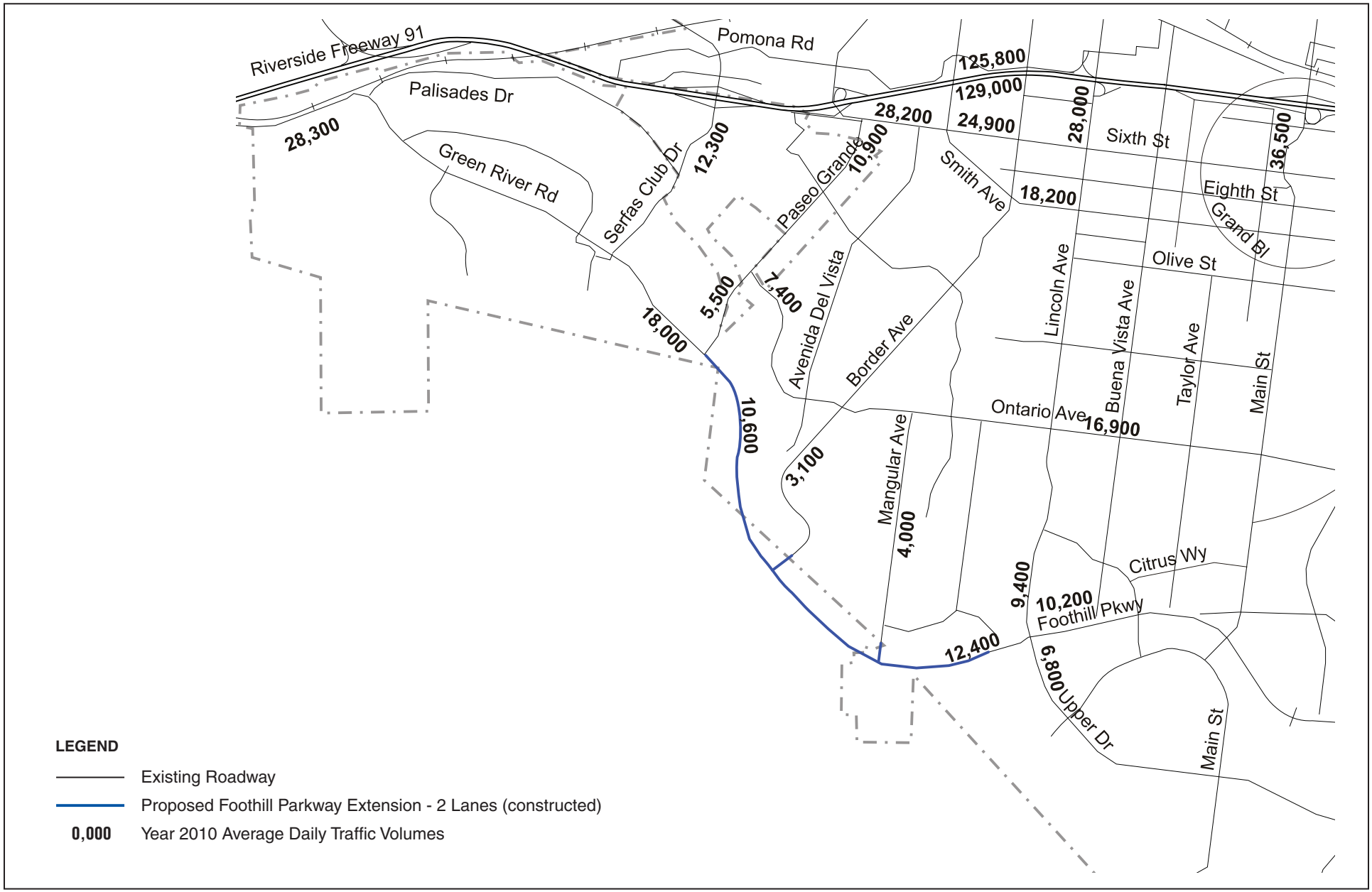
Table 7-12
Years 2010 and 2025 Reduced Width Alternative
ADT Volumes and LOS

Study Roadway Segment	Capacity (ADT)	2010 Volume (ADT)	2010 V/C – LOS	2025 Volume (ADT)	2025 V/C – LOS
6th St west of Smith Ave	53,900[1]	28,200	0.52 – A	43,000	0.80 – C
10th St west of Lincoln Ave	25,900	18,200	0.70 – B	22,000	0.85 – D
Green River Rd west of Palisades Dr	53,900[1]	28,300	0.53 – A	50,100	**0.93 – E**
Serfas Club Dr south of SR-91	35,900	12,300	0.34 – A	28,800	0.80 – C
Paseo Grande north of Foothill Pkwy	13,000	5,500	0.42 – A	9,500	0.73 – C
Ontario Ave east of Paseo Grande	13,000	7,400	0.57 – A	11,100	0.85 – D
Ontario Ave east of Lincoln Ave	35,900	16,900	0.47 – A	21,300	0.59 – A
Green River Rd west of Paseo Grande	35,900	18,000	0.50 – A	26,100	0.73 – C
Foothill Pkwy east of Paseo Grande	25,900	10,600	0.82 – D	16,200	**1.25 – F**
Foothill Pkwy east of Lincoln Ave	25,900	10,200	0.39 – A	17,700	0.68 – B
Upper Dr south of Foothill Pkwy	35,900	6,800	0.19 – A	7,900	0.22 – A
Border Ave north of Foothill Pkwy	13,000	3,100	0.24 – A	3,600	0.28 – A
Mangular Ave north of Foothill Pkwy	13,000	4,000	0.31 – A	4,500	0.35 – A
Lincoln Ave north of Foothill Pkwy	35,900	9,400	0.26 – A	9,100	0.25 – A

Notes:
ADT = Average Daily Traffic
LOS = Level of Service
V/C = Volume to Capacity ratio; deficient roadway segment operation shown in **bold**.

[1] ADT capacity reflects programmed improvements to 6th Street (west of Smith Avenue) and Green River Road (west of Palisades), to be completed in 2010.

Source: Meyer, Mohaddes Associates, February 2008.



Source: Meyer, Mohaddes Associates, June 2007.

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not to scale

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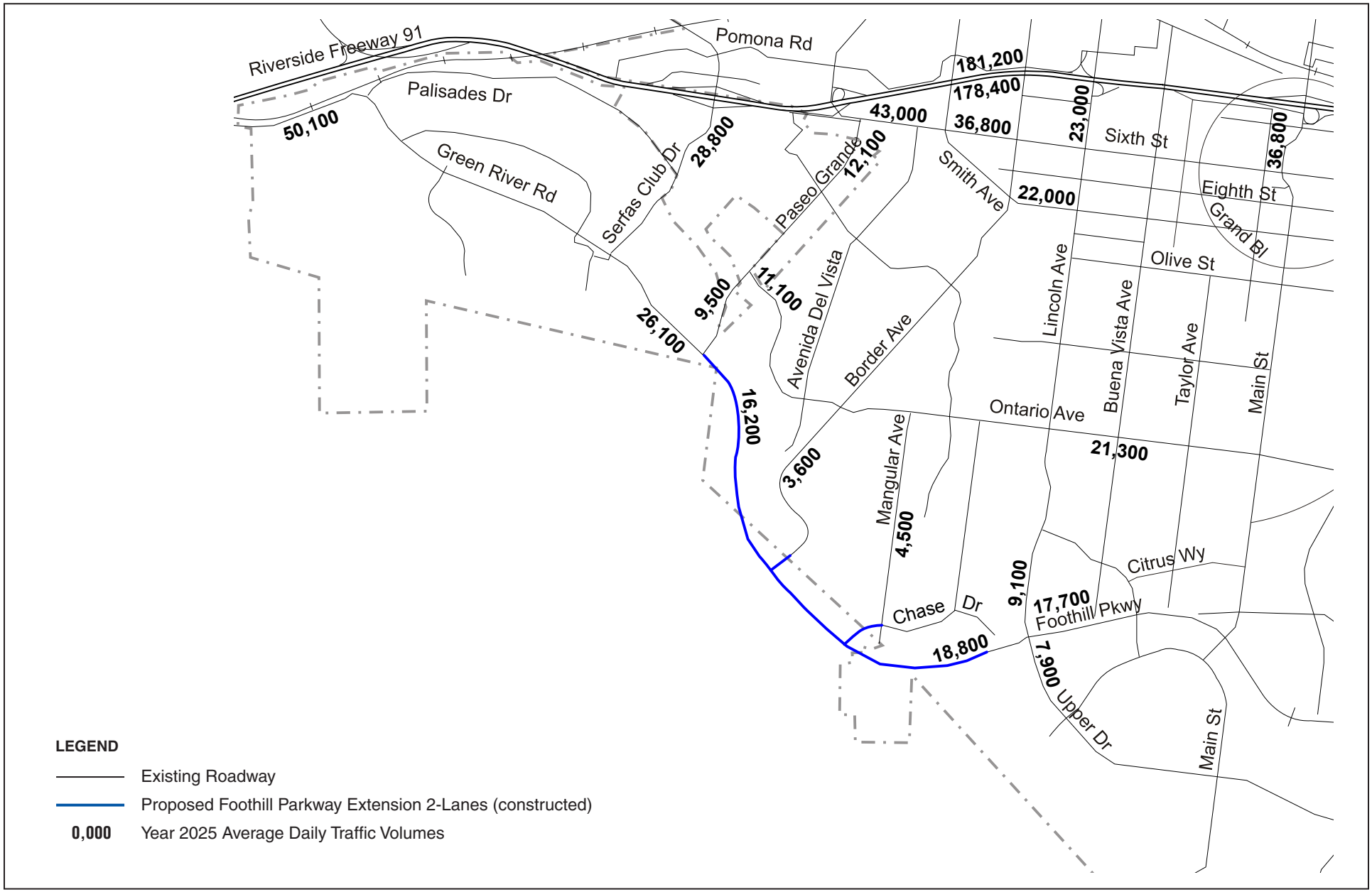
FOOTHILL PARKWAY WESTERLY EXTENSION • DRAFT EIR

Year 2010 Reduced Width Alternative ADT Volumes

Figure 7-12



Source: Meyer, Mohaddes Associates, June 2007.

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Year 2025 Reduced-Width Foothill Pkwy. with Chase Drive/Mangular Avenue Connection Alternative ADT Volumes

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Figure 7-13

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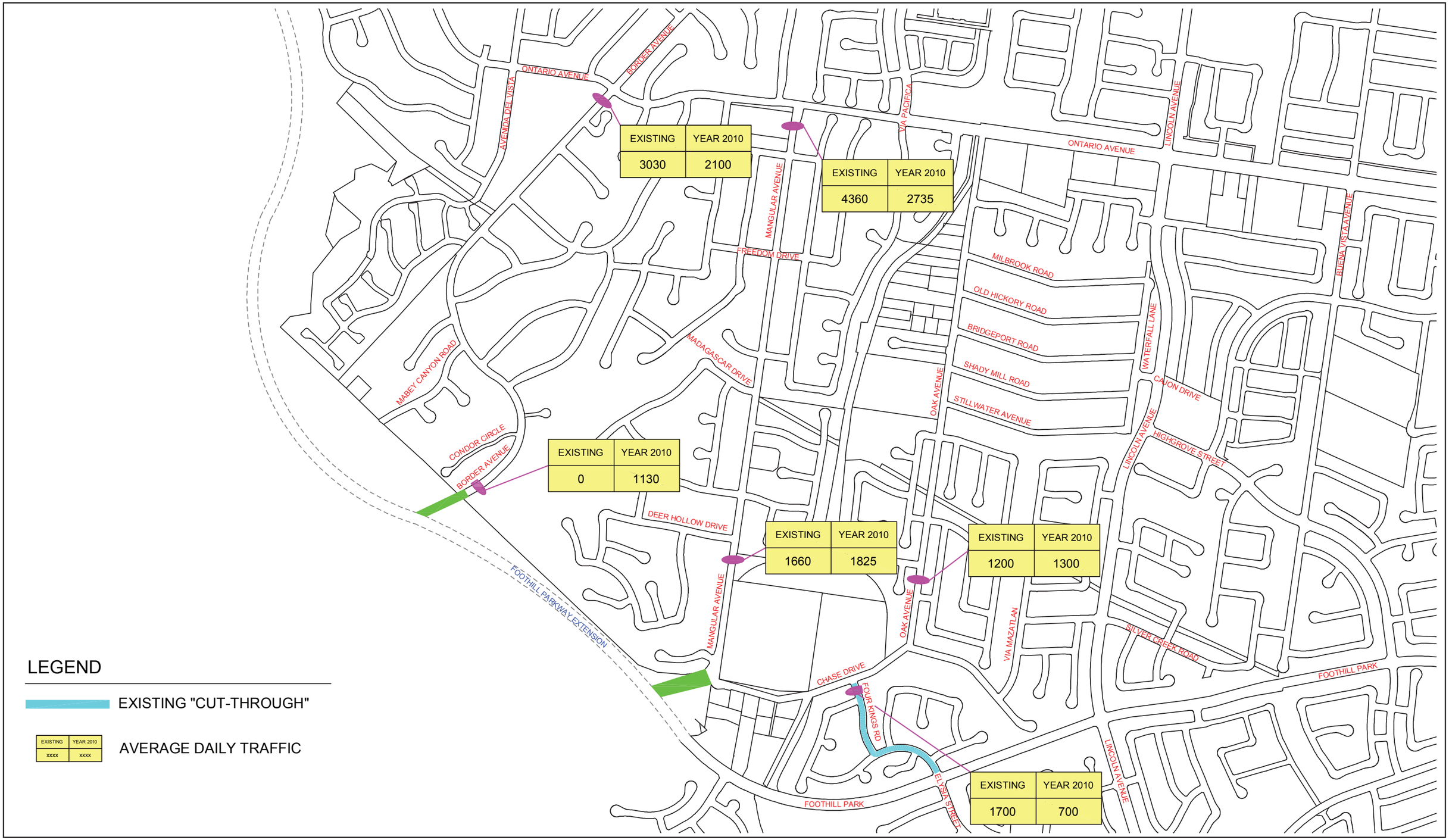

Source: City of Corona Traffic Engineering Department, 2/20/08.

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Year 2010 Focused Neighborhood Traffic with Reduced Width Alternative

Figure 7-14

Back of 11 x 17 page

As shown in Table 7-12, all study roadways are forecast to operate acceptably according to City of Corona performance criteria for forecast year 2010 under the Reduced Width Alternative. In forecast year 2025, Foothill Parkway is expected to operate at LOS F as a two-lane collector, with a volume to capacity ratio of 1.25. The segment of Green River Road west of Palisades Drive is expected to operate at LOS E. Due to the roadway geometry and close proximity of this segment to State Route 91, this arterial is considered a critical link of the interchange; therefore the City of Corona has identified LOS E as acceptable for this heavily traveled freeway interchange, consistent with the City's *General Plan* Circulation Element Policy 6.1.6. All other roadways in the study area are expected to operate at LOS D or better. Expected volumes on Foothill Parkway, as a two-lane roadway, will exceed its capacity, therefore the roadway will be considered deficient.

Compared to the No Project conditions, traffic volumes along Green River Road, Foothill Parkway, Upper Drive, Border Avenue, and Mangular Avenue increased, and volumes along 6th Street, 10th Street, Serfas Club Drive, Paseo Grande, Ontario Avenue, and Lincoln Avenue decreased in year 2010 under the Reduced Width Alternative due to the redistribution of traffic. Compared to the No Project conditions for year 2010, traffic volumes under the Reduced Width Alternative would increase by approximately 100 vehicles per day along Border Avenue and 200 vehicles per day along Mangular Avenue, which translates to a percentage growth of approximately three and five percent, respectively.

Compared to the No Project conditions for forecast year 2025 conditions, the traffic volumes along Green River Road, Foothill Parkway, Upper Drive, Border Avenue and Mangular Avenue increased and volumes along 6th Street, 10th Street, Serfas Club Drive, Paseo Grande, Ontario Avenue, and Lincoln Avenue decreased. Compared to the No Project conditions for year 2025, traffic volumes under the Reduced Width Alternative would increase by 600 vehicles per day along Border Avenue and 700 vehicles per day along Mangular, which translates to a percentage growth of approximately 20 and 18 percent, respectively.

Compared to the proposed Project, the traffic volumes along Green River Road, Serfas Club Drive, Paseo Grande, and Ontario Avenue increased, and traffic volumes along 6th Street, 10th Street, Foothill Parkway, and Lincoln Avenue decreased in Year 2010 under the Reduced Width Alternative due to the redistribution of traffic. Traffic volumes along Upper Drive, Border Avenue, and Mangular Avenue would remain unchanged in year 2010 under the Reduced Width Alternative, relative to the proposed Project.

Compared to the proposed Project for year 2025, the traffic volumes along 6th Street, 10th Street, Serfas Club Drive, Paseo Grande, and Ontario Avenue increased and traffic volumes along Green River Road and Foothill Parkway decreased under the Reduced Width Alternative due to the redistribution of traffic. Traffic volumes along Upper Drive, Border Avenue, Mangular Avenue, and Lincoln Avenue would remain unchanged in year 2025 under the Reduced Width Alternative, compared to the proposed Project.

This alternative, with the reduced-width extension of Foothill Parkway and connections at Border Avenue and Chase Drive, yields focused neighborhood study results similar to the proposed Project. Reductions in volumes, relative to existing

conditions, are expected on Four Kings Road and Elysia Street, and on Mangular Avenue and Border Avenue, near Ontario Avenue. Near the proposed Foothill Parkway extension, the traffic volumes on Border Avenue and Mangular Avenue are expected to increase, as Border Avenue and Mangular Avenue both terminate at the south end, similar to a cul-de-sac, and currently have very low traffic volumes. These increases, however, are well below the expected traffic volumes for collector roadways, consistent with the City's General Plan. Figure 7-14, Year 2010 FOCUSED NEIGHBORHOOD TRAFFIC WITH REDUCED WIDTH ALTERNATIVE, shows the focused neighborhood study results for the Reduced Width Alternative.

The current layout of fire station locations within the City was planned based on the City's General Plan Circulation Element, which assumes that the extension of Foothill Parkway, as a four-lane roadway, and connections to Border Avenue and Chase Drive will be constructed. The Reduced Width Alternative would construct proposed Foothill Parkway as a two-lane roadway, as well as connect to Border Avenue and Chase Drive. However, due to the reduced capacity of Foothill Parkway under this alternative, decreased level of service is expected along Foothill Parkway. Therefore, emergency response times to the neighborhoods in the project area may be longer than in the Project condition.

Relative to the proposed Project, in year 2010, a decreased level of service is anticipated on Foothill Parkway east of Paseo Grande from LOS A to LOS D, however this decrease is within the City of Corona performance criteria. An increased level of service is anticipated on 10th Street west of Lincoln Avenue from LOS C to LOS B. In year 2025, a decreased level of service, relative to the proposed Project, is expected on Paseo Grande north of Foothill Parkway from LOS A to LOS C, and on Foothill Parkway east of Paseo Grande from LOS D to LOS F. LOS F is considered deficient. Therefore, the Reduced Width Alternative would result in significant and unavoidable impacts related to long-term operational (traffic) impacts. An increased level of service, relative to the proposed Project in year 2025, is expected on Green River Road west of Paseo Grande from LOS D to LOS C, and on Foothill Parkway east of Lincoln Avenue from LOS D to LOS B.

In conclusion, in forecast year 2025, the Reduced Width Alternative results in Foothill Parkway operating at a deficient level of service, whereas all roadways are expected to operate within the City of Corona performance criteria in the proposed Project condition for years 2010 and 2025. Additionally, the Reduced Width Alternative would likely result in longer emergency response times than the proposed Project. Therefore, the Reduced Width Alternative would result in a greater impact than the proposed Project and, due to the anticipated deficient roadway, a significant and unavoidable impact would occur in this regard.

Air Quality

The "Reduced Width" Alternative would require approximately eight percent less grading than the proposed Project. Due to the reduction in roadway width, the Reduced Width Alternative would not operate as efficiently as the proposed Project and the roadway would have a lower vehicular capacity than the proposed Project. Therefore, the Reduced Width Alternative would result more congestion than the proposed Project.

Similar to the proposed Project, significant and unavoidable short-term (construction) emission impacts would occur under the Reduced Width Alternative. Compared to development of the proposed Project, short-term (construction) emission impacts would be slightly reduced due to less grading and construction. Similar to the proposed Project, implementation of Mitigation Measures 5.5-1a through 5.5-1d would reduce short-term (construction) emission impacts; however, due to the amount of grading and cut/fill short-term (construction) emissions, impacts would remain significant and unavoidable under the Reduced Width Alternative.

With regards to long-term (operational) air quality impacts, the Reduced Width Alternative would not improve air quality or traffic/circulation to the same degree as the proposed Project. Less traffic would be redistributed along other roadways within the area, which could potentially increase vehicle queuing and idling times at surrounding roadway intersections. Increased idling and vehicle queuing could result in higher concentrations of CO; however, an exceedance of State or Federal CO standards is not anticipated. As with the proposed alignment, this alternative would result in a less than significant long-term (operational) air quality impact.

In conclusion, the Reduced Width Alternative would result in significant unavoidable short-term (construction) emission impacts and less than significant long-term (operational) air quality impacts. The Reduced Width Alternative would have slightly less short-term (construction) emission air quality impacts and greater long-term (operational) impacts than the proposed Project.

Noise

The Reduced Width Alternative shares the same vertical alignment as the proposed Project. However, the roadway width from hinge to hinge would vary from 83 feet to 94 feet, with an actual roadway width ranging from 50 to 54 feet. Therefore, potential short-term construction and long-term operational (traffic) noise impacts associated with the Reduced Width Alternative would be reduced as the associated grading would be reduced by approximately eight percent.

Noise generated from construction crews and the transportation of construction equipment and materials to the Project site would result in a temporary increase in ambient noise levels in the Project vicinity. The Reduced Width Alternative would result in the same impacts as the proposed Project in this regard. However, as with the proposed Project, operation of construction equipment for the development of the Reduced Width Alternative would result in substantial (exceeding noise standards) temporary and periodic increases of the ambient noise levels in the Project vicinity above existing conditions, due to grading and construction activities. Therefore, short-term construction noise impacts would be significant and unavoidable. As such, the Reduced Width Alternative would result in the same short-term construction noise impacts as the proposed Project.

Relative to the proposed Project for traffic conditions, in year 2025, a decreased level of service relative to the proposed Project is expected on Paseo Grande north of Foothill Parkway and on Foothill Parkway east of Paseo Grande. On Foothill Parkway east of Paseo Grande, this decrease will reduce the level of service to LOS F. An increased level of service, relative to the proposed Project in year 2025, is expected on Green River Road west of Paseo Grande and Foothill Parkway east of

Lincoln Avenue. In forecast year 2025, the Reduced Width Alternative results in Foothill Parkway operating at a deficient level of service. Overall, the daily volumes would be similar to the proposed Project (within approximately 200 daily trips). Therefore, the overall operational noise impacts would be similar to the proposed Project, with the exception of additional vehicular noise associated with increased vehicular queuing.

In conclusion, the Reduced Width Alternative would result in the same significant and unavoidable short-term construction noise impacts and less than significant long-term operational (traffic) impacts. The Reduced Width Alternative would result in the same short-term construction noise impacts and the same long-term operational (traffic) noise impacts, as mitigated, as the Proposed Project

Biological Resources

Compared to the proposed Project, the Reduced Width Alternative would require approximately eight percent less grading than the proposed Project. The biological resource impacts associated with grading, excavation, or construction activities under the Reduced Width Alternative, although slightly reduced, would be similar to that of the proposed Project. These impacts could include increased runoff that may affect water quality, increased lighting that would affect the behavior patterns of nocturnal and crepuscular (active at dawn and dusk) wildlife, increased dust accumulation on surrounding vegetation, impacts on nesting birds/raptors, increased fire danger, and spread of exotic species. As with the proposed Project, the Reduced Width Alternative would be required to implement Mitigation Measure 5.5-1a (i.e. standard dust suppression) in Section 5.5, AIR QUALITY to reduce construction-related dust generation. Therefore, the indirect effect of impairing respiration of existing plant species on the Project site is considered less than significant. As with the proposed Project, the Reduced Width Alternative would be required to implement Mitigation Measures 5.7-1a through 5.7-1c to reduce short-term construction related impacts to biological resources to less than significant. As such, the Reduced Width Alternative would result in the same impacts as the proposed Alternative in this regard.

Vegetation impacts under the Reduced Width Alternative would be less than the proposed Project. Native and non-native vegetation impacts associated with the proposed Project are illustrated in Figure 5.7-5 in Section 5.7, VEGETATION IMPACTS. A summary of vegetation impacts under the proposed Project and this Alternative are described in Table 7-13, REDUCED WIDTH ALTERNATIVE VEGETATION IMPACTS.

Table 7-13
Reduced Width Alternative Vegetation Impacts

Vegetation Type	Proposed Project (Acres)	"Reduced Width" Alternative (Acres)	Difference
Coastal Sage Scrub	**7.25**	**6.99**	**-0.26**
Coastal Sage Scrub/Chaparral	**14.02**	**13.62**	**-0.40**
Coastal Sage Scrub/Ruderal	**0.15**	**0.13**	**-0.02**
California Buckwheat-Scalebroom Alluvial Scrub	**2.42**	**2.39**	**-0.03**
Chaparral	**22.84**	**21.33**	**-1.51**
Non-native Grassland	**1.76**	**1.67**	**-0.09**
Fremont Cottonwood-Willow Riparian Woodland	**0.40**	**0.39**	**-0.01**
Willow Riparian Woodland	0.25	0.25	0.00
Western Sycamore-Coast Live Oak Alluvial Scrub	0.97	0.97	0.00
Coast Live Oak Woodland	**5.06**	**4.95**	**-0.11**
Mule Fat Scrub	**0.78**	**0.77**	**-0.01**
Mule Fat Scrub-Willow Riparian Woodland	0.00	0.00	0.00
Ruderal	**4.81**	**4.79**	**-0.02**
Ornamental	**2.20**	**2.11**	**-0.09**
Ornamental/Developed	**1.97**	**1.92**	**-0.05**
Disturbed	**3.96**	**3.74**	**-0.22**
Developed/Ruderal	**7.31**	**7.20**	**-0.11**
Developed	**3.25**	**3.13**	**-0.12**
Total	**79.40**	**76.35**	**-3.05**

Note: Vegetation types and numbers in **bold** represent vegetation impacts that differ from the proposed Project.

Source: BonTerra Consulting, Amber Oneal, Senior Project Manager/Ecologist, electronic communication, July 17, 2008.

Development of the proposed Project would impact approximately 79.40 acres of native and non-native vegetation types. The Reduced Width Alternative would impact 76.35 acres of native and non-native vegetation types.

The Reduced Width Alternative would impact the same vegetation acreage as the proposed Project for three vegetation types, as indicated in Table 7-13. The Reduced Width Alternative would impact 3.05 fewer acres of vegetation than the proposed Project, as indicated in Table 7-13. All mitigation related to vegetation impacts (i.e. Mitigation Measures 5.7-2a and 5.7-2b) applicable to the proposed Project apply to this Alternative. Similar to the proposed Project, compliance with relevant measures from the Western Riverside MSHCP and recommended Mitigation Measures 5.7-2a and 5.7-2b would reduce impacts to a less than significant level in this regard. However, the Reduced Width Alternative would require less mitigation to replace impacted riparian habitat and native trees than the proposed Project.

Impacts on local travel routes under the Reduced Width Alternative would be similar to the proposed Project. As with the proposed Project, the Reduced Width Alternative would remove local travel routes within the direct impact area. However, few native habitat areas would be located northeast of the Project site. Therefore, this Alternative would not be expected to substantially impact wildlife movement along local travel routes. In addition, there are several local travel routes remaining to the southwest of the Project site. As with the proposed Project, the Reduced Width Alternative would result in less than significant impacts on local wildlife movement and no mitigation would be required. As such, the Reduced Width Alternative would result in the same impacts as the proposed Project in this regard.

Impacts on regional wildlife movement under the Reduced Width Alternative would be similar to the proposed Project. The Reduced Width Alternative would adversely affect regional wildlife movement along a segment of Wardlow Wash. Fresno Canyon, located 1.5 miles west of the Project site, was identified for preservation by the MSHCP to maintain the linkage between the Cleveland National Forest and the Santa Ana River/Prado Basin while Wardlow Wash has not been identified for long-term preservation. Thus, although Wardlow Wash functions as a regional wildlife corridor between the Cleveland National Forest and the Santa Ana River/Prado Basin and impacts on wildlife movement along Wardlow Wash are considered significant, the impact is considered mitigated by the City of Corona's participation in the MSHCP. Therefore, as with the proposed Project, the Reduced Width Alternative would result in less than significant impacts in this regard and no mitigation would be required. However, it is recommended that the base of the manufactured slope of the road be vegetated with native species to retain potential for some wildlife movement in Wardlow Wash (refer to Mitigation Measure 5.7-4). In addition, it is recommended that the culvert conveying water from Wardlow Wash under Paseo Grande remain large enough to allow for continued movement of wildlife species. The existing 8-foot culvert is sufficient for movement of medium-sized wildlife. Recreational trails, access roads, and wildlife movement have been considered in the design of two multi-purpose trails as part of the proposed alignment and this Alternative would also incorporate the proposed trails.

The two special status plants observed on the Project site are the intermediate mariposa lily and Coulter's matilija poppy are within the Project footprint for the Reduced Width Alternative. Therefore, impacts to special status plants would be the same under the Reduced Width Alternative as the proposed Project. As with development of the proposed Project, the Reduced Width Alternative would be required to implement Mitigation Measures 5.7-2a and 5.7-2b to reduce impacts on intermediate mariposa lily and Coulter's matilija poppy to less than significant.

Suitable habitat is present on the Project site for the least Bell's vireo, a species listed in Section 6.1.2 of the MSHCP as a species that requires additional surveys if suitable habitat is present. This species was not observed during the 2000 or 2006 focused surveys. The least Bell's vireo was observed on only one visit and was therefore considered a migrant using the Project site for dispersal. Although, the Project site was not occupied for breeding in 2008, the Project site does contain potentially suitable breeding habitat that could be occupied in the future. Any impact on this species would be considered significant. As with the proposed Project, the Reduced Width Alternative would result in less than significant impacts to the least Bell's vireo with implementation of Mitigation Measure 5.7-6a. As such, the Reduced

Width Alternative would result in the same impacts as the proposed Project in this regard.

Although suitable habitat is present on the Project site, burrowing owl was determined to be absent from the Project site at this time because it was not detected during the 2006 or 2008 focused surveys. However, suitable habitat is present on the Project site and the Project site is located within the additional survey area for this species; therefore, burrowing owl may move into the Project site prior to the start of construction. Any impact on an active burrowing owl burrow would be considered a significant impact. Per MSHCP requirements, a pre-construction survey for burrowing owl would be required to confirm absence of this species from the Project impact area prior to the start of construction. As with the proposed Project, the Reduced Width Alternative would result in less than significant impacts to the burrowing owl with implementation of Mitigation Measure 5.7-6b. As such, the Reduced Width Alternative would result in the same impacts as the proposed Project in this regard.

As with the proposed Project, the Reduced Width Alternative would be required to implement Mitigation Measures 5.7-7a through 5.7-7e to reduce urban/wildland interface impacts related to the drainage, night lighting, noise, invasive species, and barriers to less than significant levels. As such, the Reduced Width Alternative would result in the same impacts as the proposed Project in this regard.

In conclusion, as with the proposed Project, the Reduced Width Alternative would result in less than significant impacts related to biological resources. The Reduced Width Alternative would result in a lesser impact than the proposed Project in this regard. Additionally, this Alternative would require less mitigation than the proposed Project.

Cultural Resources

The *Cultural Resources Assessment* indicated that no archaeological resources or paleontological resources were identified within the cultural resources survey area. Potential cultural resource impacts under the Reduced Width Alternative would be similar to that of the Project alignment. The Reduced Width Alternative would have a footprint approximately 3.4 acres (4.4 percent) less than the proposed Project. Therefore, any cultural resources potentially located in this area would not be impacted. As with the proposed Project, with implementation of Mitigation Measures 5.8-2a through 5.8-2b, impacts on undiscovered archaeological resources and paleontological resources would be reduced to less than significant levels under the Reduced Width Alternative.

The *Revised Addendum* concludes that, other than the arroyo stone footbridge, no other remaining features retain requisite integrity to be considered eligible for the California Register. The arroyo stone footbridge is a “historical resource” under CEQA and demolition of the footbridge would constitute material impairment under CEQA. As with the proposed the proposed Project, Mitigation Measures 5.8-1a through 5.8-1c would be required to lessen impacts to the historic resource. However, impacts to the historic arroyo stone footbridge would remain significant and unavoidable. As such, both the proposed Project and the Reduced Width Alternative would result in significant and unavoidable impacts in this regard.

In conclusion, the Reduced Width Alternative would result in less than significant impacts related to archaeological resources and paleontological resources, and significant and unavoidable impacts related to historic resources. The Reduced Width Alternative would result in the same impacts as the proposed Project in this regard.

Hydrology and Water Quality

The Reduced Width Alternative would have the same general alignment and similar improvements as the proposed Project; however, with a minor reduction in footprint. Similar to the proposed Project, the Reduced Width Alternative would be required to implement mitigation measures to reduce impacts related to hydrology and water quality to less than significant. The Reduced Width Alternative would slightly reduce runoff; however, this reduction would be insignificant, and would result in relatively the same impacts as the proposed Project in this regard.

The Reduced Width Alternative would result in relatively the same impacts related to hydrology and water quality as the proposed Project. In conclusion, as with the proposed Project, the Reduced Width Alternative would result in less than significant impacts in this regard.

Geologic and Seismic Hazards

The Reduced Width Alternative would have the same general alignment as the proposed Project; however, with a minor reduction in footprint. Since the Reduced Width Alternative would traverse the same geologic and seismic hazards as the proposed Project, impacts would be relatively the same as the proposed Project.

Compared to development of the proposed Project, the Reduced Width Alternative would result in similar soil impacts associated with grading, excavation, or construction activities. Compared with the construction of the proposed alignment, under the Reduced Width Alternative, geotechnical constraints would be similar because the soil types within the Project site are the same. Grading activities have the potential to result in the exposure of soils to short-term erosion by wind and water. In order to mitigate the potential effects of erosion on-site, temporary and permanent erosion control measures would be required, such as the use of sandbags, hydroseeding, landscaping, and/or soil stabilizers. The Project Contractor would be required to submit a SWPPP, which includes erosion control measures in order to comply with the NPDES requirements of the CWA. Implementation of appropriate grading measures and a Storm Water Pollution Control Plan would reduce the potential impacts to less than significant levels. The Reduced Width Alternative would result in the same impact as the proposed Project in this regard.

Implementation of the Reduced Width Alternative has the potential to expose commuters to adverse effects associated with rupture of a known earthquake fault. The proposed Foothill Parkway alignment is located in a seismically active region. Active faults that are part of the Whittier-Elsinore and Chino Fault Zones traverse the Project site. The City's *General Plan* provides goals and policies for the potential geotechnical hazards within the City of Corona (refer to the City's *General Plan* Policies 11.1.2 and 11.1.5 identified above). The goals and policies were established to ensure that development satisfactorily addresses the proper siting,

design, and construction of “essential facilities”, including their continued functioning in the event of a seismic or other geologic disaster. As with development of the proposed alignment, development under the Reduced Width Alternative would be required to comply with the UBC, State, County, and City regulations related to seismic hazards. Follow-up field studies during PS&E would confirm that the Project design meets these seismic safety standards, or would recommend engineering techniques to ensure compliance with the most current engineering standards for seismic design. However, this Alternative would not be consistent with the City’s *General Plan* Policy 11.1.2. As with the proposed alignment, development of this Alternative with adequate setbacks to avoid fault rupture impacts may not be possible since active faults traverse the Project site. Although this Alternative would be required to implement Mitigation Measure 5.10-2 to reduce fault rupture impacts, significant and unavoidable impacts would occur in this regard. Therefore, the Reduced Width Alternative would result in the same impact as the proposed Project in this regard.

As noted above, ground shaking on the Project site and vicinity is likely to occur. Local commuters may be exposed to seismic ground shaking if it occurs during the short period of time that they drive on the proposed Foothill Parkway roadway. The Reduced Width Alternative would be designed and constructed to withstand the magnitude of an earthquake at the surrounding faults. Based on predicted maximum peak ground accelerations at the site and given the soil types identified on-site, ground failure could occur at the Project site. As with development of the proposed Project, development under the Reduced Width Alternative would be required to comply with the UBC, State, County, and City regulations related to seismic ground shaking. Follow-up field studies during PS&E would confirm that the Project design meets these seismic safety standards, or would recommend engineering techniques to ensure compliance with regulations. Compliance with the UBC, State, County and City regulations related to seismic ground shaking would reduce this potential impact to less than significant levels. The Reduced Width Alternative would result in the same impact as the proposed Project in this regard.

With regards to liquefaction impacts, the Reduced Width Alternative would have similar impacts as the proposed Project because the design would traverse the same soil types, which are susceptible to liquefaction. As with development of the proposed Project, development of the Reduced Width Alternative would traverse a number of large, alluvial-filled canyons including the Wardlow, Mabey, and Hagador Canyons. Additionally, young and old alluvial fan deposits underlie the south portion of the alignment as it enters the Corona Plain. Since alluvial sediments commonly have an unconsolidated nature and can experience shallow groundwater conditions, the potential for liquefaction is possible within these areas. However, implementation of the proposed alignment would be in conformance with established construction and design parameters set forth in the UBC. The proposed Project is required to comply with the UBC, State, County, and City regulations related to liquefaction. Follow-up field studies during PS&E would confirm that the Project design meets these seismic safety standards, or would recommend engineering techniques to ensure compliance with regulations. Compliance with the UBC, State, County and City regulations related to liquefaction would reduce this potential impact to less than significant levels. The Reduced Width Alternative would result in the same impact as the proposed Project in this regard.

With regards to potential landslide impacts, neither the proposed Project nor the Reduced Width Alternative is anticipated to result significant impacts. No existing landslides have been mapped along the proposed alignment area; as such, no landslides would be located within the Project area under the Reduced Width Alternative. However, the potential exists for heavily sheared and fractured material movement due to the proximity of the alignment to the Whittier-Elsinore Fault Zone. As with the proposed Project, if left untreated, areas of weak materials would have the potential to be subject to movement triggered by strong seismic shaking and, therefore, adverse conditions could occur. However, during the design phase of the Reduced Width Alternative, areas that are found to contain weak materials would be investigated and thus, remedial grading options would be developed to stabilize materials that are susceptible to seismic landslide movement. Therefore, the potential for seismically induced landslides is less than significant. As such, both the proposed alignment and the Reduced Width Alternative would result in less than significant impacts related to landslides.

Because the soil types included in the Project area under the Reduced Width Alternative are the same as soil types as documented for the proposed Project, the Reduced Width Alternative would have similar impacts with regards to soil expansion and slope stability. There are no known ongoing or planned large-scale extractions of groundwater, gas, oil, or geothermal energy that would cause subsidence in the Project area. Therefore, there is no known hazard related to land subsidence along the proposed Project or associated with the Reduced Width Alternative.

Construction under both the proposed Project and the Reduced Width Alternative would include man-made fill, trench-walls, and cut and fill slopes. Bedrock underlies the proposed Project and is considered only slightly compressible; therefore, it is expected to adequately support embankment fills and roadway loads. Man-made fill and alluvium along the alignment are typically compressible and may be collapsible; as a result, these materials may not be suitable for the support of fills and structural loads as they currently exist. The Reduced Width Alternative would require the same man-made fill, trench-walls, and relatively the same amount of cut and fill slopes as the proposed alignment. During the final design phase and the construction of the Reduced Width Alternative, soils with the potential to collapse or expand would be identified, evaluated, and mitigated. The Reduced Width Alternative would be required to implement the same mitigation measures as the proposed Project, to reduce impacts related to expansive soils to a less than significant level. The Reduced Width Alternative would result in the same impact as the proposed Project in this regard.

All cut and fill slopes under the Reduced Width Alternative would incorporate standard practices of the UBC during the design phase and construction to identify any unstable conditions. If unstable conditions are found on-site, the Project Contractor would suggest recommendations for the final design phase of the alignment. In addition, the Project Contractor would suggest recommendations regarding trench-wall stability, which would be provided during the design phase. The Reduced Width Alternative would be required to implement the same mitigation measures as the proposed Project, to reduce impacts associated with unstable slopes and trench-wall stability to a less than significant level. The Reduced Width Alternative would result in the same impact as the proposed Project in this regard.

In conclusion, the Reduced Width Alternative would result in less than significant impacts related to soil erosion, ground shaking, liquefaction, landslides, and expansive soils/soil stability. However, this Alternative would result in significant and unavoidable impacts related to fault rupture. The Reduced Width Alternative would result in relatively the same impacts related to geologic and seismic hazards as the proposed Project.

ABILITY TO MEET PROJECT OBJECTIVES

The Reduced Width Alternative results in reduced impacts related to aesthetics, light, and glare; short-term air quality; and biological resources. The Reduced Width Alternative would result in relatively the same impact related to land use compatibility and access; public health and safety; noise; cultural resources; hydrology and water quality; and geologic and seismic hazards as the proposed Project. The Reduced Width Alternative would result in a greater impact related to consistency with relevant planning; traffic and circulation; and long-term air quality than the proposed Project. However, as with the proposed Project, impacts can be mitigated to a level of less than significant under the Reduced Width Alternative, with the exception of aesthetic; traffic and circulation; short-term air quality; noise; cultural resource; and geologic and seismic hazards impacts.

The Reduced Width Alternative would attain Objectives 1, 3, 5, and 7 at a lesser level than the proposed Project. The Reduced Width Alternative would attain Objectives 4 and 6 at the same level as the proposed Project. The Reduced Width Alternative would not attain Objective 2. The Reduced Width Alternative was rejected because it failed to meet the Project objectives to the same degree as the proposed Project. Additionally, this Alternative was rejected because it failed to avoid significant and unavoidable impacts. The Reduced Width Alternative would result in the same significant and unavoidable impacts as the proposed Project.

7.3.6 "STONE BRIDGE AVOIDANCE" ALTERNATIVE

DESCRIPTION OF ALTERNATIVE

The "Stone Bridge Avoidance" Alternative would result in the construction of the Foothill Parkway Westerly Extension along the same alignment as described for the proposed Project, including the proposed roadway connections to Border Avenue and Chase Drive/Mangular Avenue.

As noted in Section 3.0, PROJECT DESCRIPTION, the Project currently proposes a modified Mabey Canyon Debris Basin, which includes an open spillway structure (triple-box culvert), rather than a drop inlet structure. Also, instead of lowering the basin floor, the basin limits would be extended upstream to accommodate the original storage volume. This design was submitted to the Riverside County Flood Control and Water Conservation District (RCFC&WCD, or "Flood Control") in the *Mabey Canyon Hydrology and Hydraulics Study* prepared by RBF, dated October 2007, and was approved by Flood Control in April 2008.

This "Stone Bridge Avoidance" Alternative revisits the grading concept currently proposed for the Project. In this alternative, the basin floor would be lowered in order to maintain the existing basin perimeter and fully avoid the existing historic arroyo stone footbridge. This Alternative, as in the proposed Project, maintains the previously-approved open spillway concept.

IMPACT COMPARISON TO THE PROPOSED PROJECT

Specific short-term construction and long-term operational impacts, as well as noted mitigation measures discussed in Section 5.0 for the proposed Project are applicable for the "Stone Bridge Avoidance" Alternative. However, this Alternative would result in increased hydrology impacts related to flooding. The Stone Bridge Avoidance Alternative would result in fewer biological resource impacts related to vegetation and would require less mitigation to reduce impacts to less than significant in this regard. As such, the impact discussion for this Alternative focuses on biological resources related to vegetation, hydrology, and cultural resources.

Biological Resources

Vegetation impacts under the Stone Bridge Avoidance Alternative would be less than the proposed Project. Native and non-native vegetation impacts associated with the proposed Project are illustrated in Figure 5.7-5 in Section 5.7, VEGETATION IMPACTS. A summary of vegetation impacts under the proposed Project and this Alternative are described in Table 7-14, STONE BRIDGE AVOIDANCE ALTERNATIVE VEGETATION IMPACTS.

Table 7-14
Stone Bridge Avoidance Alternative Vegetation Impacts

Vegetation Type	Proposed Project (Acres)	"Stone Bridge Avoidance" Alternative (Acres)	Difference
Coastal Sage Scrub	**7.25**	**7.13**	**-0.12**
Coastal Sage Scrub/Chaparral	14.02	14.02	0.00
Coastal Sage Scrub/Ruderal	0.15	0.15	0.00
California Buckwheat-Scalebroom Alluvial Scrub	2.42	2.42	0.00
Chaparral	22.84	22.84	0.00
Non-native Grassland	1.76	1.76	0.00
Fremont Cottonwood-Willow Riparian Woodland	0.40	0.40	0.00
Willow Riparian Woodland	0.25	0.25	0.00
Western Sycamore-Coast Live Oak Alluvial Scrub	0.97	0.97	0.00
Coast Live Oak Woodland	5.06	5.06	0.00
Mule Fat Scrub	0.78	0.78	0.00
Mule Fat Scrub-Willow Riparian Woodland	0.00	0.00	0.00
Ruderal	**4.81**	**4.79**	**-0.02**
Ornamental	**2.20**	**1.50**	**-0.70**

Table 7-14 (Continued)
Stone Bridge Avoidance Alternative Vegetation Impacts

Vegetation Type	Proposed Project (Acres)	"Stone Bridge Avoidance" Alternative (Acres)	Difference
Ornamental/Developed	1.97	1.97	0.00
Disturbed	3.96	3.96	0.00
Developed/Ruderal	7.31	7.31	0.00
Developed	3.25	3.25	0.00
Total	**79.40**	**78.56**	**-0.84**

Note: Vegetation types and numbers in **bold** represent vegetation impacts that differ from the proposed Project.

Source: BonTerra Consulting, Amber Oneal, Senior Project Manager/Ecologist, electronic communication, July 17, 2008.

Development of the proposed Project would impact approximately 79.40 acres of native and non-native vegetation types. The Stone Bridge Avoidance Alternative would impact 78.56 acres of native and non-native vegetation types.

The Stone Bridge Avoidance Alternative would impact the same vegetation acreage as the proposed Project for 15 vegetation types, as indicated in Table 7-14. Similar to the proposed Project, compliance with relevant measures from the Western Riverside MSHCP and recommended Mitigation Measures 5.7-2a and 5.7-2b would reduce impacts to a less than significant level in this regard.

The Stone Bridge Avoidance Alternative would result in fewer impacts than the proposed Project on coastal sage scrub by 0.12 acres, ruderal by 0.02 acres and ornamental by 0.70 acres. Coastal sage scrub vegetation is proposed for conservation within the MSHCP Criteria Area; however, the Project site is not located within the Criteria Area. Impacts on these vegetation types are considered adverse but mitigated by the City of Corona's participation in the MSHCP. Therefore, as with the proposed Project, this Alternative would result in less than significant impacts in this regard and no mitigation would be required. Ruderal and ornamental vegetation generally have low biological value because they are composed of unvegetated areas or are vegetated with non-native species. These areas generally provide limited habitat for native plant and wildlife species, although they may occasionally be used by native species. Therefore, impacts on ruderal and ornamental vegetation would not be considered significant. Therefore, as with the proposed Project, this Alternative would result in less than significant impacts in this regard and no mitigation would be required.

Hydrology and Water Quality

As with the proposed Project, the Stone Bridge Avoidance Alternative would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. As noted above, the increase in runoff volume caused by the proposed Project is

insignificant. Storm drainage improvements would be designed to accommodate existing and anticipated future runoff volumes and flow rate. Additionally, detention basins, culverts, channels, main line storm drains, and other runoff conveyance facilities associated with the proposed alignment would have a design capacity adequate to operate under projected runoff and debris loads. As with the proposed Project, storm drain improvements associated with the Stone Bridge Avoidance Alternative would reduce potential flooding impacts related to stormwater runoff to less than significant level and no mitigation would be required. The Stone Bridge Avoidance Alternative would result in the same impacts as the proposed Project in this regard.

As with the proposed Project, the Stone Bridge Avoidance Alternative would not be subject to inundation by seiche, tsunami, or mudflow. The potential for tsunamis and seiches impacting the proposed roadway alignment is not considered a risk due to the Project site's distance from the Pacific Ocean and the absence of lakes or large bodies of water in the immediate area. According to the City's *General Plan*, the primary inundation threat to the City of Corona is from Lake Mathews, which impounds 182,000 acre-feet. Lake Matthews is approximately seven miles southeast of Corona and approximately 13 miles east of the Project site. Failure of either dam would cause flooding along the Temescal Wash in the eastern and northeastern portions of the City.[2] As such, Lake Matthews does not pose a significant flood risk to the Project site. The flow pattern from Prado Dam is westward away from Corona; therefore, Prado Basin and Dam do not pose a significant flood risk to the Project site.

Implementation of the Stone Bridge Avoidance Alternative has the potential to expose people or structures to a significant risk of loss, injury, or death involving flooding due to dam failure. The Foothill Parkway extension would cross over the Mabey Canyon Debris Basin. The basin was built to provide flood protection for the developed areas downstream, and is completely dry during most of the year. This, along with its limited capacity, helps minimize the likelihood of a damaging inundation. The majority of the area downstream of the dam is residential; therefore integrity of the dam is paramount. Flood Control has indicated that the Stone Bridge Avoidance Alternative modifications to Mabey Canyon Debris Basin could potentially compromise the integrity of the basin and would be unacceptable; refer to Appendix 15.15 for the letters provided by the Flood Control dated October 10, 2006 and July 3, 2008 describing their concerns. Flood Control has expressed concerns about potential impacts to the stability of the dam embankment, as well as possible seepage by the deepening of the dam embankment and jacking a new low-flow outlet pipe through the embankment. Flood Control has indicated that the bore and jack method associated with this Alternative, which is necessary to install a new low-flow outlet, has a strong potential to destabilize the existing dam core, as well as to create a possible seepage path along the new pipe, compromising the stability of the dam. Potential impacts to the stability of the dam and possible seepage could pose a risk to public health and safety. Additionally, grading associated with this Alternative would result in deeper cuts at the upstream end of the reservoir than that of the proposed Project, which would likely result in severe erosion of the dam perimeter upstream onto private properties. Therefore, unlike the proposed Project,

[2] *City of Corona General Plan*, EIP Associates, March 17, 2004.

the Stone Bridge Avoidance Alternative would result in a new significant and unavoidable impact related to flooding impacts.

In addition, the Mabey Canyon Debris Basin modifications under this Alternative would produce a smaller basin floor area. Flood Control expressed concern about this smaller area, as it will make maintenance more difficult, leaving less room to manage the piling, drying, and loading of sediment and debris accumulation after storm events.

Cultural Resources

The *Cultural Resources Assessment* indicated that no archaeological resources or paleontological resources were identified within the cultural resources survey area. As with the proposed Project, with implementation of Mitigation Measures 5.8-2a through 5.8-3b, impacts on undiscovered archaeological resources and paleontological resources would be reduced to less than significant levels under the this Alternative.

As previously described in Section 5.0, the existing arroyo stone footbridge located near Mabey Canyon Debris Basin is considered eligible for the California Register. The arroyo stone footbridge is a "historical resource" under CEQA, and demolition of the footbridge would constitute material impairment under CEQA. In an effort to avoid this resource, the Stone Bridge Avoidance Alternative evaluates a re-design of the Mabey Canyon Debris Basin that would maintain its existing perimeter by lowering the basin floor. This concept as proposed under the Stone Bridge Avoidance Alternative would fully avoid this significant and unavoidable Project impact.

ABILITY TO MEET PROJECT OBJECTIVES

The "Stone Bridge Avoidance" Alternative would not attain all of the Project objectives to the same degree as the proposed Project. This Alternative would attain Project objective 3 at a lesser degree than the proposed Project.

The City of Corona presented this Alternative to Flood Control, in an effort to obtain concurrence and support for the proposed modification. Flood Control raised the following concerns with this Alternative, which lead them to deem it unacceptable:

- The grading would result in deeper cuts at the upstream end of the reservoir, which would likely result in severe headcutting upstream onto private properties.

- Due to the deepening of the basin, as well as the wider dam embankment supporting the proposed roadway, the floor area of the basin will be reduced. Reduction of the floor area will cause negative impacts for maintenance, as there will be less area to maneuver, stockpile, dry and load sediment, and/or spread out debris to dry prior to removal.

- Flood Control expressed concerns about potential impacts to the stability of the dam embankment, as well as possible seepage, by the deepening the dam embankment and jacking a new low-flow outlet pipe through the

embankment. Potential impacts to the stability of the dam and possible seepage could pose a risk to public health and safety. The majority of the area downstream of the dam is residential, therefore integrity of the dam is paramount.

Flood Control provided letters to the City of Corona on October 10, 2006 and July 3, 2008, describing these concerns. These letters are included in Appendix 15.15. Based upon the response received from Flood Control, which maintains jurisdiction over the Mabey Canyon Debris Basin, approval of this concept is unlikely. Therefore, avoidance of the existing arroyo stone footbridge is infeasible.

The Stone Bridge Avoidance Alternative was rejected because:

- This Alternative would not offer an overall environmental advantage over the proposed Project. Avoidance of a significant and unavoidable impact to cultural resources is offset by a new significant and unavoidable impact related to flooding.
- This Alternative would attain Project objective 3 at a lesser degree than the proposed Project.
- This Alternative is infeasible due to social, legal, and policy reasons. Flood Control has indicated they would not approve the debris basin modifications associated with this Alternative. Flood Control is unable to accept the Stone Bridge Avoidance Alternative because of potential safety impacts to upstream and downstream residents.

7.4 "ENVIRONMENTALLY SUPERIOR" ALTERNATIVE

Table 7-15, COMPARISON OF PROJECT ALTERNATIVES, provides a comparison matrix of the relative impacts and the ability of each Alternative to achieve the proposed Project objectives.

Table 7-15
Comparison of Project Alternatives

Impacts	No Project	No Border Avenue or Chase Drive/Mangular Avenue Connection	With Chase Drive/Mangular Avenue Connection	With Border Avenue Connection	Reduced Width	Stone Bridge Avoidance Alternative
Land Use Compatibility and Access	<	=	=	=	=	=
Consistency with Relevant Plans	>	=	=	=	>	=
Aesthetics, Light, and Glare	<	<*	<*	<*	<*	=*

Table 7-15 (Continued)
Comparison of Project Alternatives

Impacts	No Project	No Border Avenue or Chase Drive/Mangular Avenue Connection	With Chase Drive/Mangular Avenue Connection	With Border Avenue Connection	Reduced Width	Stone Bridge Avoidance Alternative
Public Health and Safety	<	=	=	=	=	=
Traffic and Circulation	>	=	=	=	>*	=
Short-Term Air Quality	<	<*	<*	<*	<*	=*
Long-Term Air Quality	<	>	>	>	>	=
Noise	<	=*	=*	=*	=*	=*
Biological Resources	<	<	<	<	<	<
Cultural Resources	<	=*	=*	=*	=*	=
Hydrology and Water Quality	<	=	=	=	=	=
Geologic and Seismic Hazards	<	=*	=*	=*	=*	=*
Objective 1	<	<	<	<	<	=
Objective 2	<	=	=	=	<	=
Objective 3	<	<	<	<	<	<
Objective 4	<	=	=	=	=	=
Objective 5	<	<	<	<	<	=
Objective 6	=	=	=	=	=	=
Objective 7	<	<	<	<	<	=

> Impact is greater than the proposed Project or attains Objective at greater level than the Project
< Impact is less than the proposed Project or attains Objective at a lesser level than the Project
= Impact is equal to the proposed Project or attains Objective at the same level as the Project
* Impact remains significant and unavoidable

The purpose of the alternatives evaluation is to develop Project alternatives that reduce or eliminate significant impacts. CEQA Section 15126(d)(2) indicates that if the "No Project" Alternative is the "Environmentally Superior" Alternative, then the EIR shall also identify an Environmentally Superior Alternative among the other Alternatives. In this case, the alternative with the least environmental impact would be the "No Project" Alternative.

The proposed Project was developed in an effort to improve traffic congestion within the City of Corona by providing another east/west roadway, thereby minimizing long-term impacts to air quality and traffic. Several impacts would be similar to the other design alternatives addressed above; however, compared to the proposed Project, impacts related to aesthetics, short-term air quality, short-term noise, cultural resources, and geologic and seismic hazards were determined to be significant and unavoidable under all design alternatives.

Based on the analysis and review of the ability to reduce potential impacts, it has been determined that both the "With Chase Drive/Mangular Avenue Connection" Alternative and the "With Border Avenue Connection" Alternative are the environmentally superior roadway alignment alternative among the alignment

alternatives evaluated above. On balance, both the "With Chase Drive/Mangular Avenue Connection" Alternative and the "With Border Avenue Connection" Alternative have almost the same amount of environmental impacts as the proposed Project, with some improvements in some environmental areas offset by degradations in other areas. Although neither of these design alternatives would appreciably reduce the significance of impacts when compared to that of the proposed Project, a nominal reduction in the significance of environmental impacts would be achieved. Therefore, both the "With Chase Drive/Mangular Avenue Connection" Alternative and the "With Border Avenue Connection" Alternative are equally considered the "environmentally superior alternative" among all alternatives evaluated in this EIR.

If the City of Corona ultimately rejects any or all project alternatives, the rationale for rejection will be presented in the findings that are required before the City certifies the EIR and takes action on the proposed Project. According to Section 15126.6(f)(1) of the CEQA Guidelines, among the factors that may be taken into account when addressing feasibility of alternatives are environmental impacts, site suitability, economic viability, availability of infrastructure, general plan consistency, regulatory limitations, jurisdictional boundaries, and whether the applicant (in this case the City of Corona) could reasonably acquire, control, or otherwise have access to an alternative site.