FTIP ID # Pending January 2019 – SR-74 Lower Ortega Highway Widening Project

TCWG Consideration Date October 23, 2018

Project Description

Caltrans proposes to widen SR-74 from two lanes to four lanes from Calle Entradero (PM 1.0) to 150 feet east of the City/County line. Restriping and pavement restoration will be required from the City/County line to Reata Road (PM 2.1). The project would provide one additional 12-foot wide lane in each direction, as well as a 12-foot wide painted median at the remaining western portion within limits of the proposed project. In addition, a paved 5-foot wide shoulder would be provided on each side of the roadway to accommodate Class II (striped on-road) bicycle facilities, except from Avenida Siega to the City/County limits where the shoulder would transition to an 8-foot wide shoulder to merge with the County portion of the project. Two project alternatives will be evaluated: the No Build Alternative and Build Alternative 2 (Preferred Alternative)

No Build Alternative. The No Build Alternative does not include improvements to the existing SR-74; therefore, SR-74 would be maintained in its existing two-lane condition and would continue to be used by commuters, recreation traffic, and commercial trucks. The No Build Alternative is not consistent with regional and local transportation plans, would not alleviate existing and projected congestion in the study area, and would not meet the project purpose and need. The No Build Alternative serves as the baseline against which to evaluate the effects of the Preferred Alternative.

Build Alternative (Preferred Alternative). As discussed previously, two 12-foot general purpose lanes in each direction and a painted median are located at the eastern portion of the project area. Preferred Alternative would widen this segment of the existing SR-74, primarily on the north side of the roadway, to minimize removal of mature trees and to avoid removal of the existing sidewalk on the south side of SR-74. However, the existing sidewalk on the north side of SR-74 between Calle Entradero and Via Cordova to the north will be reconstructed. The existing meandering sidewalk would be reconstructed as a straight sidewalk (not curvilinear) within the existing public right-of-way. This alternative would result in the roadbed changing from the current varying width of 62.3 feet at Calle Entradero and 24.6 feet at the City/County Line to a width varying from 78 to 79 feet, including lanes, shoulders, and median. A paved 5-foot wide shoulder would be provided on each side of the roadway to accommodate Class II (striped on-road) bicycle facilities, except from Avenida Siega to the City/County limits where the shoulder would transition to an 8-foot wide shoulder to merge with the County portion of the project. The edge of the pavement would have concrete curbs on each side of the roadway. The proposed additional lanes, shoulders, median, drainages, driveways, and sidewalk have been developed consistent with the standards in the *Caltrans Highway Design Manual*.

> ***Intersection Improvements.*** There are five roadways that intersect with SR-74 from the south within the project limits: Calle Entradero, Via Cordova, Via Cristal, Via Errecarte, and Avenida Siega. North of SR-74, Via Cordova becomes Hunt Club Drive and Avenida Siega becomes Shade Tree Lane. Additionally, to the north, Palm Hill Drive and Toyon Drive provide access to private property. Each intersection would be modified/widened to accommodate the additional lanes, median, and shoulders. At intersections where there are existing right-turn pockets (Via Cordova and Via Cristal), the right-turn pocket would remain. No new intersections are proposed.

Pedestrian and Bicycle Facilities. The existing sidewalk on the south side of SR-74 would be maintained in its current location with the exception of a portion of sidewalk at the intersection of Via Cordova, where the sidewalk would be shifted to the south and reconstructed to provide for the right-turn pocket at this intersection. A new sidewalk would be constructed to the east beyond Avenida Siega and would connect to the planned County sidewalk system to provide continuity and would be consistent with City and County goals.

Class II bicycle facilities are planned and would be provided on each side of the roadway as part of the 5-foot wide paved shoulders throughout the project limits. These facilities would be in conformance with the Orange County Transportation Authority (OCTA) Commuters Bikeways Strategic Plan (CBSP). The City's General Plan states in its Circulation Element that there is the need to promote an extensive public bicycle, pedestrian, and equestrian trails network. These bicycle facilities would comply with the City's goals.

Signals and Lighting. Currently, there are no traffic signals within the project limits. Based on the Settlement Agreement, a four-way traffic signal at the intersection of SR-74 and Via Cordova/Hunt Club Drive will be constructed. Therefore, a Temporary Construction Easement (TCE) will be required on both north and south sides of SR-74 and Via Cordova/Hunt Club Drive for installing the four-way traffic signal.

Type of Project
Change to existing state highway

County Orange	**Narrative Location/Route & Postmiles** 12-ORA-074-PM 1.08/2.09 **Caltrans Projects –** EA# 08692 EFIS 1200000051

Lead Agency: Caltrans District 12

Contact Person	**Phone#**	**Fax#**	**Email**
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Hot Spot Pollutant of Concern *(check one or both)* **PM2.5** X **PM10** X

Federal Action for which Project-Level PM Conformity is Needed *(check appropriate box)*

Categorical Exclusion (NEPA)		**EA or Draft EIS**	**FONSI or Final EIS**	**PS&E or Construction**	**Other**
	X				

Scheduled Date of Federal Action: 2019

NEPA Assignment – Project Type *(check appropriate box)*

Exempt	**Section 326 –Categorical Exemption**		**Section 327 – Non-Categorical Exemption**
		X	

Current Programming Dates *(as appropriate)*

	PE/Environmental	**ENG**	**ROW**	**CON**
Start	2017	2020	2020	2023
End	2019	2022	2022	2030

Project Purpose and Need (Summary):

Purpose: The purpose of the project is to accomplish the following specific objectives:

- Relieve existing and future traffic congestion and improve the flow of traffic on SR-74
- Accommodate planned growth and development in the surrounding areas
- Provide improvements consistent with local planning documents
- Gap closure

Need: SR-74 serves as a key connection route, between Orange and Riverside Counties. The closest other roadways that provide this connection are State Route 91 (SR-91), approximately 26 miles to the north, and State Route 76 (SR-76), approximately 32 miles to the south. Both of these facilities are heavily traveled. As a result of the distance to alternative connectors, SR-74 experiences a consistent amount of regional traffic, despite the rural design of much of the roadway. In addition to serving this regional demand, the subject segment of SR-74 also serves as a primary access to the City. Because of topography, SR-74 is one of the few arterial highways within the City that extends to the east beyond I-5.

The need for this project is based on an assessment of the existing and future transportation demand, and current and predicted future traffic on SR-74 as measured by level of service (LOS). LOS is based on the ratio of traffic volume to the design capacity of the facility. It is expressed as a range from LOS A (free traffic flow with low volumes and high speeds resulting in low densities) to LOS F (traffic volumes exceed capacity and result in forced flow operations at low speeds resulting in high densities).

Surrounding Land Use/Traffic Generators

Land uses along SR-74 are primarily urban commercial and residential developments. SR-74 serves as a key connection route between Orange and Riverside Counties. Because of topography, SR-74 is one of the few arterial highways within the City of San Juan Capistrano that extends to the east much beyond I-5. These routes are heavily used for commuting during weekday and weekend peak periods. The residential development generates mostly automobile traffic, while the commercial development generates a mixture of automobile and truck traffic.

Existing truck 7.35% value was obtained from the most recent 2016 Annual Average Daily Truck Traffic on the California State Highway System prepared by Caltrans. Future year truck of 7.35% is anticipated to remain the same as existing conditions due to the following reasons: a) Caltrans' Annual Average Daily Truck Traffic data demonstrates that the truck percentage along SR-74 has remained unchanged from 2002 to 2016, and b) SR-74 is not planned to be a future freight corridor nor serve future large-scale logistics centers, so the future year truck percentage is expected to remain unchanged. Implementation of the project is not expected to increase truck percentage, so the truck percentage stays the same between the No Build and Build conditions.

Opening Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

See attached analysis – Table 1.

RTP Horizon Year / Design Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

See attached analysis – Table 2.

Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

See attached analysis – Table 3.

RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

See attached analysis – Table 4.

Describe potential traffic redistribution effects of congestion relief *(impact on other facilities)*

The proposed roadway widening will improve existing and future regional mobility and traffic flow to and from the local street network, be consistent with local planning, and consider impacts to SR-74 Right of Way. In addition, congestion relief on the local streets will serve to improve vehicle safety by improving mobility.

Comments/Explanation/Details *(attach additional sheets as necessary)*
PM2.5/PM10 Hot-Spot Analysis
The SR-74 Lower Ortega Highway Widening Project is located within a nonattainment area for federal PM2.5 standards and within an attainment/maintenance area for the federal PM10 standards. Therefore, per 40 CFR Part 93 hot-spot analyses are required for conformity purposes. However, the EPA does not require hot-spot analyses, qualitative or quantitative, for projects that are not listed in section 93.123(b)(1) as an air quality concern.

According to 40 CFR Part 93.123(b)(1), the following are Projects of Air Quality Concern (POAQC) :

i. New highway projects have a significant number of diesel vehicles, and expanded highway projects that have a significant increase in the number of diesel vehicles;
ii. Projects affecting intersections that are at a Level of Service D, E, or F with a significant number of diesel vehicles, or those that will change to Level of Service D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project;
iii. New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location;
iv. Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location; and
v. Projects in or affecting locations, areas or categories of sites which are identified in the PM2.5 and PM10 applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

The project does not qualify as a Project of Air Quality Concern (POAQC) because of the following reasons:

i. The proposed Project is not a new or expanded highway project. The proposed Project would reduce traffic congestion at and through adjacent local street intersections. However, in addition to widening SR-74, the Project would slightly alter the traffic flow on local streets within the project area. As shown in Tables 1 and 2, the proposed Project would slightly alter the traffic volumes along multiple segments on SR-74 within the Project limits. While the number of diesel trucks could increase along these roadways, the future with project volumes would not exceed the 10,000 average daily truck trip criteria for a POAQC.
ii. The LOS conditions in the project vicinity with and without the proposed project are shown in Tables 1 through 4. As shown, the SR-74 Lower Ortega Highway Widening Project would result in a small decrease in the level of service (LOS) at several intersections within the Project limits. However, as discussed above, the Project would not result in a significant increase in the number of diesel vehicles in the Project limits.
iii. The proposed Build Alternative does not include the construction of a new bus or rail terminal.
iv. The proposed Build Alternative does not expand an existing bus or rail terminal.
v. The proposed Build Alternative is not in or affect locations, areas, or categories of sites that are identified in the $PM_{2.5}$ and PM_{10} applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

Therefore, the proposed Project meets the CAA requirements and 40 CFR 93.116 without any explicit hot-spot analysis. The proposed Project would not create a new, or worsen an existing, PM_{10} or $PM_{2.5}$ violation.

ATTACHMENTS for FTIP ID # Pending in January 2019
SR-74 Lower Ortega Highway Widening Project

The tables provided below were obtained from the Draft Traffic Study Report, which documents the existing and future traffic volumes and LOS for the SR-74 Lower Ortega Highway Widening Project.

Table 1: Opening Year 2025 AADTs for State Route 74

Roadway	No Build Alternative	Annual Average Daily Traffic			
		Total Vehicles	Trucks (%)	Total Trucks	LOS
SR-74	Between Calle Entradero and Hunt Club Drive/Via Cordova	46,300	7.35	3,400	F
	Between Hunt Club Drive/Via Cordova and Via Cristal	40,300	7.35	2,960	F
	Between Via Cristal and Strawberry Lane	40,200	7.35	2,950	F
	Between Strawberry Lane and Via Errecarte	40,000	7.35	2,940	F
	Between Via Errecarte and Shadetree Lane/Avenida Siega	39,900	7.35	2,930	F
Roadway	**Build Alternative**	**Annual Average Daily Traffic**			
		Total Vehicles	**Trucks (%)**	**Total Trucks**	**LOS**
SR-74	Between Calle Entradero and Hunt Club Drive/Via Cordova	51,100	7.35	3,060	C
	Between Hunt Club Drive/Via Cordova and Via Cristal	46,600	7.35	2,680	C
	Between Via Cristal and Strawberry Lane	46,400	7.35	2,660	C
	Between Strawberry Lane and Via Errecarte	46,200	7.35	2,650	C
	Between Via Errecarte and Shadetree Lane/Avenida Siega	46,100	7.35	2,650	C

Source: Draft Traffic Study Report SR-74 Lower Ortega Highway Widening Project (September 2018).
EA 08692 Project Number 1200000051

Note: Existing truck % values were obtained from the most recent 2016 Annual Average Daily Truck Traffic on the California State Highway System prepared by Caltrans. Future year truck % is anticipated to remain the same as existing conditions due to the following reasons: a) Caltrans' Annual Average Daily Truck Traffic data demonstrates that the truck % along SR-74 has remained unchanged from 2002 to 2016, and b) SR-74 is not planned to be a future freight corridor nor serve future large-scale logistics centers, so the future year truck % is expected to remain unchanged. Implementation of the project is not expected to increase truck %, so the truck % stays the same between the No Build and Build conditions.

Table 2: Design Year 2045 AADTs for State Route 74

Roadway	No Build Alternative	Annual Average Daily Traffic			
		Total Vehicles	Trucks (%)	Total Trucks	LOS
SR-74	Between Calle Entradero and Hunt Club Drive/Via Cordova	59,600	7.35	4,380	F
	Between Hunt Club Drive/Via Cordova and Via Cristal	51,400	7.35	3,780	F
	Between Via Cristal and Strawberry Lane	51,300	7.35	3,770	F
	Between Strawberry Lane and Via Errecarte	51,000	7.35	3,750	F
	Between Via Errecarte and Shadetree Lane/Avenida Siega	51,000	7.35	3,750	F
Roadway	**Build Alternative**	**Annual Average Daily Traffic**			
		Total Vehicles	**Trucks (%)**	**Total Trucks**	**LOS**
SR-74	Between Calle Entradero and Hunt Club Drive/Via Cordova	68,600	7.35	5,040	D
	Between Hunt Club Drive/Via Cordova and Via Cristal	61,400	7.35	4,510	D
	Between Via Cristal and Strawberry Lane	61,300	7.35	4,500	D
	Between Strawberry Lane and Via Errecarte	61,100	7.35	4,490	D
	Between Via Errecarte and Shadetree Lane/Avenida Siega	61,000	7.35	4,480	D

Source: Draft Traffic Study Report SR-74 Lower Ortega Highway Widening Project (September 2018).
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Table 3: Opening Year 2025 Intersections Delays and LOS

No Build Alternative	A.M. Peak Hour		P.M. Peak Hour	
	Delay (Sec)	LOS	Delay (Sec)	LOS
La Novia Avenue/SR-74	33.8	C	23.0	C
Belford Drive/SR-74	>200	F	24.7	C
Sundance Drive/SR-74	>200	F	95.7	F
Avenida Victoria-Via Cuartel	126.7	F	>200	F
Avenida Linda Vista/SR-74	32.9	D	15.1	C
Calle Entradero/SR-74	>200	F	>200	F
Hunt Club Drive - Via Cordova/SR-74	>200	F	>200	F
Via Cristal/SR-74	>200	F	>200	F
Strawberry Lane/SR-74	68.3	F	>200	F
Via Errecarte/SR-74	175.5	F	>200	F
Shadetree Lane-Avenida Siega/SR-74	>200	F	119.1	F
Reata Road/SR-74	20.3	C	16.4	B
Antonio Parkway-La Pata Avenue/SR-74	168.7	F	>200	F
Build Alternative	**A.M. Peak Hour**		**P.M. Peak Hour**	
	Delay (Sec)	**LOS**	**Delay (Sec)**	**LOS**
La Novia Avenue/SR-74	52.7	D	49.2	D
Belford Drive/SR-74	37.8	E	115.6	F
Sundance Drive/SR-74	-	F	>200	F
Avenida Victoria-Via Cuartel	136.9	F	>200	F
Avenida Linda Vista/SR-74	181.6	F	14.8	B
Calle Entradero/SR-74	199.4	F	>200	F
Hunt Club Drive - Via Cordova/SR-74	38.7	D	25.1	C
Via Cristal/SR-74	>200	F	>200	F
Strawberry Lane/SR-74	28.3	D	44.6	E
Via Errecarte/SR-74	-	F	27.2	D
Shadetree Lane-Avenida Siega/SR-74	64.4	F	26.7	D
Reata Road/SR-74	48.4	D	17.5	B
Antonio Parkway-La Pata Avenue/SR-74	>200	F	>200	F

Source: Draft Traffic Study Report SR-74 Lower Ortega Highway Widening Project. (September 2018). EA 08692 Project Number 1200000051

Note: Intersections where the delay is represented with a dash (-) has through volumes that block the turn movements throughout the peak hour. As such, Synchro does not report a delay at this intersection for the blocked turn movements. Therefore, the worst-case movements at these intersections operate at LOS F.

Table 4: Design Year 2045 Intersections Delays and LOS

No Build Alternative	A.M. Peak Hour		P.M. Peak Hour	
	Delay (Sec)	LOS	Delay (Sec)	LOS
La Novia Avenue/SR-74	73.8	E	53.1	D
Belford Drive/SR-74	44.1	E	>200	F
Sundance Drive/SR-74	>200	F	38.8	E
Avenida Victoria-Via Cuartel	>200	F	-	F
Avenida Linda Vista/SR-74	57.8	F	17.3	C
Calle Entradero/SR-74	>200	F	>200	F
Hunt Club Drive - Via Cordova/SR-74	-	F	>200	F
Via Cristal/SR-74	>200	F	>200	F
Strawberry Lane/SR-74	155.5	F	>200	F
Via Errecarte/SR-74	>200	F	>200	F
Shadetree Lane-Avenida Siega/SR-74	>200	F	-	F
Reata Road/SR-74	108.7	F	27.2	C
Antonio Parkway-La Pata Avenue/SR-74	>200	F	>200	F
Build Alternative	**A.M. Peak Hour**		**P.M. Peak Hour**	
	Delay (Sec)	**LOS**	**Delay (Sec)**	**LOS**
La Novia Avenue/SR-74	114.9	F	111.9	F
Belford Drive/SR-74	81.5	F	-	F
Sundance Drive/SR-74	-	F	-	F
Avenida Victoria-Via Cuartel	-	F	-	F
Avenida Linda Vista/SR-74	-	F	-	F
Calle Entradero/SR-74	-	F	96.0	F
Hunt Club Drive - Via Cordova/SR-74	107.4	F	56.5	F
Via Cristal/SR-74	20.0	C	-	F
Strawberry Lane/SR-74	45.5	E	-	F
Via Errecarte/SR-74	-	F	-	F
Shadetree Lane-Avenida Siega/SR-74	-	F	-	F
Reata Road/SR-74	>200	F	81.2	F
Antonio Parkway-La Pata Avenue/SR-74	>200	F	>200	F

Source: Draft Traffic Study Report SR-74 Lower Ortega Highway Widening Project. (September 2018). EA 08692 Project Number 1200000051

Note: Intersections where the delay is represented with a dash (-) has through volumes that block the turn movements throughout the peak hour. As such, Synchro does not report a delay at this intersection for the blocked turn movements. Therefore, the worst-case movements at these intersections operate at LOS F.

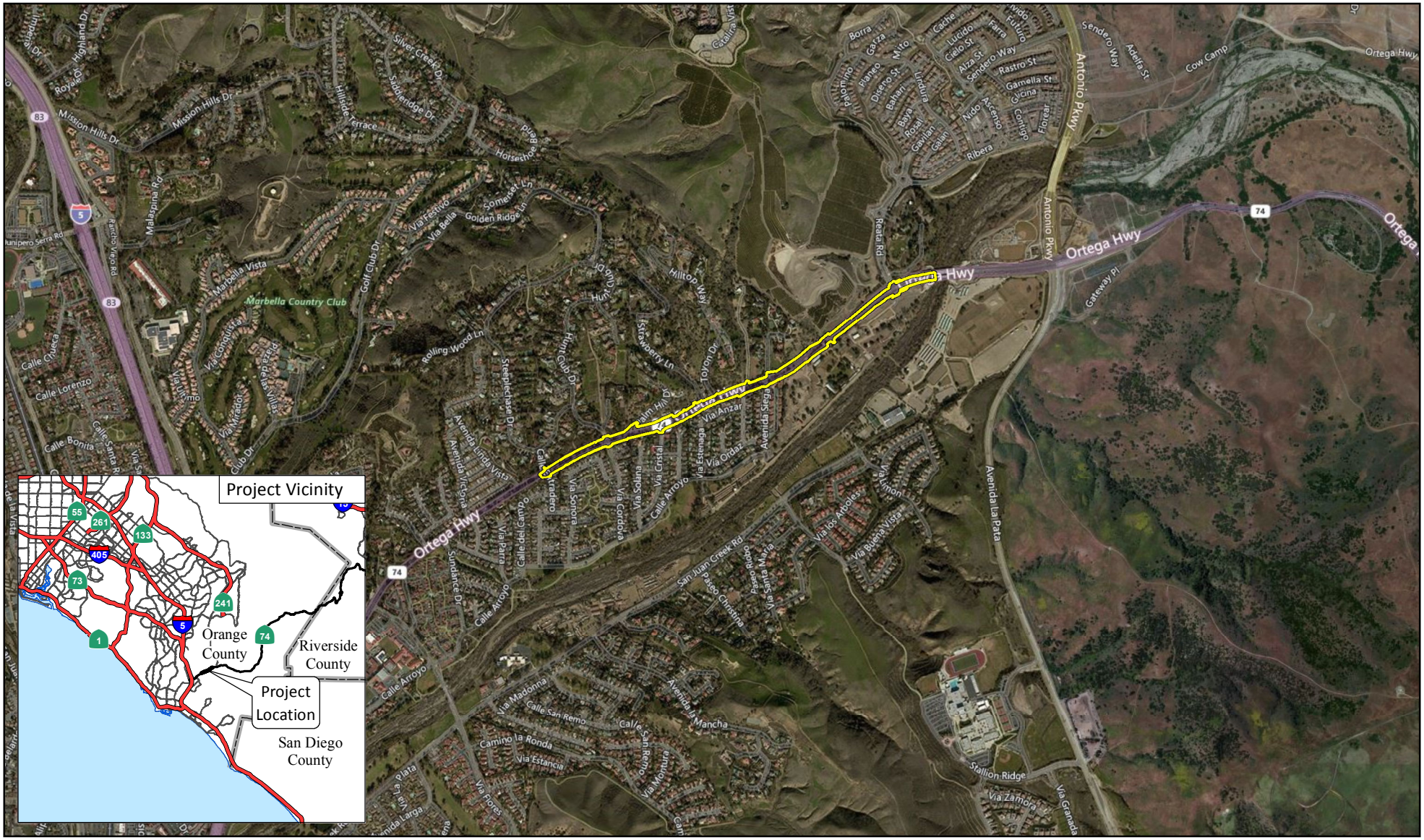

FIGURE 1-1

SOURCE: Bing Aerial, 2015

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State Route 74 Improvement Project (Widening) EA No. 086920
Traffic Study Report

Regional and Project Location

LEGEND

Project Area

Study Area Intersections

FIGURE 1-2

0 500 1000

FEET

SOURCE: ESRI

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State Route 74 Improvement Project (Widening) EA No. 086920

Traffic Study Report

Study Area Intersections