Application of Criteria for a Project of Air Quality Concern

Project Title: State Route 84 Expressway Widening Project
Project Summary for Air Quality Conformity Task Force Meeting: October 24, 2013

Description

- The proposed project is composed of two segments of SR 84, referred to as North and South, in the City of Livermore.
- The South Segment (Concannon Boulevard to Ruby Hill Drive) is in detailed design, has federal funding, and is subject to assessment for $PM_{2.5}$ conformity.
- The North Segment (Concannon Boulevard to Jack London Boulevard) is currently under construction.
- Once completed, the combined segments will widen SR 84 from two lanes to six lanes between Jack London Boulevard and Stanley Boulevard and to four lanes between Stanley Boulevard and Ruby Hill Drive.
- The information provided in the attached form addresses the ultimate six and four lane project.

Background

- NEPA process for Negative Declaration/Finding of No Significant Impact (ND/FONSI) was completed in September 2008 for the ultimate project.
- Project ties into the existing four- to six-lane facilities between Pigeon Pass to the south and the I-580/Isabel Avenue interchange to the north (completed in 2008 and 2012, respectively).
- Federal funds are being sought for the South Segment, triggering the $PM_{2.5}$ assessment requirement.

Not a Project of Air Quality Concern (40 CFR 93.123(b)(1))

(i) New or expanded highway projects with significant number/increase in diesel vehicles?

- The project would add one lane in each direction in the South Segment but would not result in a significant increase in diesel vehicles.
- In both 2015 and 2035, truck percentages with the project would either decrease or remain the same compared to the No Build scenario.
- Half of total truck AADT for both No Build and Build in 2015 and 2035 is expected to consist of two-axle trucks.
    - The project would increase truck AADT by a maximum of 122 in 2015 and 242 in 2035.
    - Of those, trucks with three or more axles would comprise no more than approximately 60 trucks per day in 2015 and 120 trucks per day in 2035.
- The additional capacity from the project would primarily serve automobile traffic.

(ii) Affects intersections at LOS D, E, or F with a significant number of diesel vehicles?—Not Applicable

(iii) New bus and rail terminals and transfer points?—Not Applicable

(iv) Expanded bus and rail terminals and transfer points?—Not Applicable

(v) Affects areas identified in PM_{10} or $PM_{2.5}$ implementation plan as site of violation?

- There is no state implementation plan for PM2.5, and the project area is therefore not identified in an implementation plan as an area of potential violation (40 CFR Section 93.123(b)(1)(v)).
- In January 2013, the USEPA issued a final rule stating that that the San Francisco Bay Area nonattainment area in California has attained the 2006 24-hour $PM_{2.5}$ National Ambient Air Quality Standard (78 Federal Register 1760).
- The project area is not included in the Bay Area Air Quality Management District's Community Air Risk Evaluation program, which identifies Bay Area communities that are disproportionately impacted by emissions from transportation and stationary sources.

RTIP ID# *(required)* 22776

TIP ID# *(required)* ALA050014

Air Quality Conformity Task Force Consideration Date
October 24, 2013

Project Description *(clearly describe project)*

In September 2008, the California Department of Transportation (Department), in cooperation with the Alameda County Transportation Commission (ACTC) and the City of Livermore, approved a Negative Declaration/Finding of No Significant Impact (ND/FONSI) for the State Route (SR) 84 Expressway Widening Project, Alameda County, California (EA 297600; State Clearinghouse No. 2007102077; URL: http://www.dot.ca.gov/dist4/envdocs.htm, under "Route 84 Expressway Widening Project"). The project would widen and upgrade SR 84 to expressway standards from Ruby Hill Drive to Jack London Boulevard in eastern Alameda County, California (Post Miles 22.5 to 27.3; see Figures 1 and 2). The project would also modify and upgrade the intersections of SR 84 with local roads. The widening would generally follow the existing alignment. SR 84 north of Vallecitos Road is also referred to as Isabel Avenue.

A project-level conformity determination was issued by FHWA on July 8, 2008.

In 2011, during detailed project design, the project was divided into two segments for construction: a North Segment (Caltrans 04256-EA 297611) and a South Segment (04256-EA 297621).

- The North Segment extends from north of Concannon Boulevard in the south to Jack London Boulevard in the north (PM 25.5/27.1). This segment of SR 84 is being widened from two to four lanes between north of Concannon Boulevard and Stanley Boulevard, and from two to six lanes between Stanley Boulevard and Jack London Boulevard, consistent with the ND/FONSI project description. The North Segment has no federal funding, and construction is in progress.
- The South Segment extends from south of Ruby Hill Drive in the south to north of Concannon Boulevard in the north (PM 22.9/25.7; see Figure 2). This segment of SR 84 would be widened from two to four lanes between Ruby Hill Drive and north of Concannon Boulevard, consistent with the PA-ED project description. The South Project has federal funding, and construction is scheduled for 2015 to 2016.

This consultation focuses on the South Segment of the project, which has federal funding and is therefore subject to assessment for $PM_{2.5}$ project-level conformity.

Type of Project: Change to existing State highway

County	*Narrative Location/Route & Postmiles* On SR 84 from Ruby Hill Drive to Concannon Boulevard (Post Miles 22.9/25.7).
Alameda	***Caltrans Projects – EA#*** 297621

Lead Agency: Alameda County Transportation Commission

Contact Person	*Phone#*	*Fax#*	*Email*
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Federal Action for which Project-Level PM Conformity is Needed *(check appropriate box)*

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

Scheduled Date of Federal Action: January 2015

NEPA Delegation – Project Type *(check appropriate box)* Not applicable

Exempt	**Section 6004 – Categorical Exemption**	**Section 6005 – Non-Categorical Exemption**

Current Programming Dates *(as appropriate)*

	PE/Environmental	ENG	ROW	CON *(South Segment only)*
Start	4/1/05	8/1/07	2/2/08	3/1/15
End	8/5/08	12/1/14	12/1/14	12/1/16

Project Purpose and Need (Summary): *(please be brief)*

The purpose of the project is to:

- Improve SR 84 as a regional connection between I-680 and I-580, consistent with other programmed projects, by completing a continuous four- to six-lane facility between Pigeon Pass and the I-580/Isabel Avenue interchange;
- Improve local traffic circulation by adding capacity on SR 84 and including intersection improvements, thereby attracting regional traffic currently using local streets back onto the SR 84 corridor; and
- Complete the statutory designation of this segment of SR 84 as an expressway facility by providing controlled access and relocating private utilities outside of State right-of-way.

Surrounding Land Use/Traffic Generators *(especially effect on diesel traffic)*

The majority of traffic on SR 84 is from single-family residential development. Other sources include mining operations, commercial uses, vineyards, recreational facilities, and undeveloped land. Land uses in the project area are shown in Figure 3.

Brief summary of assumptions and methodology used for conducting analysis

The South Segment of the SR 84 Expressway Widening Project has federal funding and is therefore subject to assessment for PM2.5 project-level conformity. The South Segment extends from south of Ruby Hill Drive in the south to north of Concannon Boulevard in the north (PM 22.9/25.7; see Figure 2). Traffic data for adjacent parts of SR 84 are provided for local context.

Consistent with the ND/FONSI, the No Build data used in this analysis assume that SR 84 will have two lanes throughout the project corridor. (The North Segment is under construction but is not yet open to traffic.)

The Build Alternative data used in this analysis assume that SR 84 will have six lanes between Jack London Boulevard and Stanley Boulevard and four lanes between Stanley Boulevard and Ruby Hill Drive.

AADT and truck percentages were provided by Fehr and Peers in September 2013. Fehr and Peers developed the data based on their 2008 traffic analysis work that focused on truck volumes on SR 84.

AADT data for 2007 and 2030 were interpolated to 2015, based on the difference between Caltrans 2012 traffic counts and the 2030 forecasts, and extrapolated to 2035. Truck percentages for 2015 were interpolated between 2007 and 2030. Truck percentages for 2035 were assumed to be the same as 2030.

The project's traffic analysis found that under 2007 (existing) conditions as well as 2030 No Build and Build conditions, approximately half of the truck AADT throughout the project corridor would consist of two-axle trucks. In addition, traffic counts conducted in May 2009 for the Alameda Countywide Truck Travel Demand Model showed that SR 84 in the project vicinity had approximately 61 percent small (two-axle) trucks, 7 percent medium (three-axle) trucks, and 32 percent large (four-plus axle) trucks.[1] Association of Bay Area Governments land use forecasts generally show that existing development trends will continue for the foreseeable future. Therefore, two-axle trucks are expected to comprise approximately half of total truck AADT for both 2015 and 2035 No Build and Build.

[1] Cambridge Systematics. 2010. The Countywide Truck Travel Demand Model. Final Report. Prepared for Alameda County Congestion Management Agency by Cambridge Systematics, Inc., Dowling & Associates, and Quality Counts, Inc. June.

Opening Year: If facility is a highway or street, Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

SR 84 Intersection Location	Peak Hour LOS, AM (PM)	
	No Build	Build
Stanley Boulevard	B (B)	B (B)
Concannon Boulevard	B (B)	B (B)
Vineyard Avenue	B (B)	**A** (B)
Vallecitos Road	F (B)	**B (C)**
Ruby Hill Drive	A (F)	A (**A**)

Boldfaced LOS indicate a change in future conditions with Build.

SR 85 Segment	2015 No Build			2015 Build			Truck AADT increase with Build
	AADT	Truck %	Truck AADT	AADT	Truck %	Truck AADT	
North of Stanley Blvd	25,000	2.8	700	39,600	2.0	792	92
North of Concannon Blvd	20,600	3.0	618	33,800	2.1	710	92
North of Vineyard Ave	22,700	2.4	545	30,300	2.2	667	122
North of Vallecitos Rd	13,100	5.6	734	18,100	4.7	851	117
North of Ruby Hill	26,400	4.0	1,056	28,000	4.0	1,120	64
South of Ruby Hill	26,900	3.9	1,049	28,500	3.9	1,112	62

Source: Fehr and Peers 2013.

RTP Horizon Year / Design Year: If facility is a highway or street, Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

SR 84 Intersection Location	Peak Hour LOS, AM (PM)	
	No Build	Build
Stanley Boulevard	B (C)	B (**D**)
Concannon Boulevard	B (C)	**C (B)**
Vineyard Avenue	B (C)	**A** (C)
Vallecitos Road	F (F)	**C (B)**
Ruby Hill Drive	A (F)	A (**A**)

Boldfaced LOS indicate a change in future conditions with Build.

SR 85 Segment	2035 No Build			2035 Build			Truck AADT increase with Build
	AADT	Truck %	Truck AADT	AADT	Truck %	Truck AADT	
North of Stanley Blvd	27,300	4.4	1,201	45,900	3.0	1,377	176
North of Concannon Blvd	22,600	4.2	949	39,400	3.0	1,182	233
North of Vineyard Ave	26,200	3.4	891	35,800	3.1	1,110	219
North of Vallecitos Rd	20,300	5.9	1,198	28,800	5.0	1,440	242
North of Ruby Hill	56,200	3.1	1,742	60,000	3.1	1,860	118
South of Ruby Hill	55,800	3.1	1,730	59,400	3.1	1,841	112

Source: Fehr and Peers 2013.

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

Not applicable

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

Opening Year: If facility is a bus, rail or intermodal facility/terminal/transfer point, # of bus arrivals for Build and No Build, % and # of bus arrivals will be diesel buses

Not applicable

RTP Horizon Year / Design Year: If facility is a bus, rail or intermodal facility/terminal/transfer point, # of bus arrivals for Build and No Build, % and # of bus arrivals will be diesel buses

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

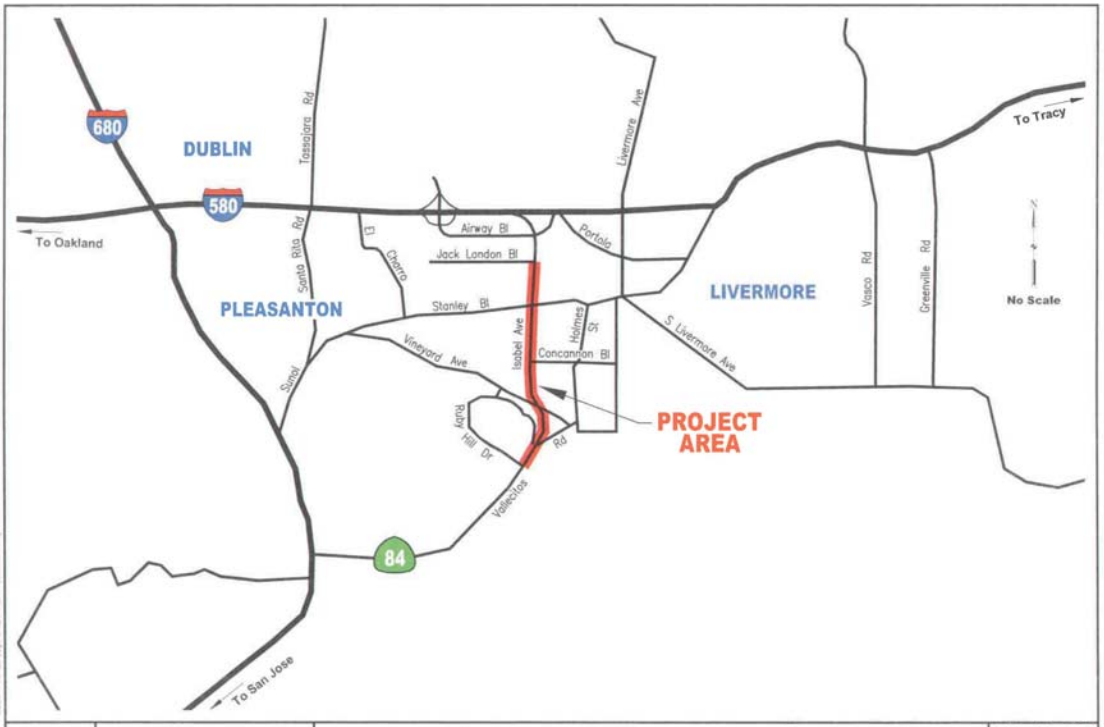
The SR 84 Expressway Widening Project, in combination with the now-completed SR 84 Pigeon Pass Safety Project (Caltrans EA 172400) directly to the south and the I-580/Isabel Avenue Interchange Project (Caltrans EA 171300) directly to the north, is intended to improve SR 84 as a regional connection between I-580 and I-680. Adding capacity on SR 84 is meant to attract traffic currently using local streets back onto the SR 84 corridor, which would reduce traffic redistribution impacts on other local facilities consistent with the City of Livermore General Plan.

Comments/Explanation/Details (please be brief)

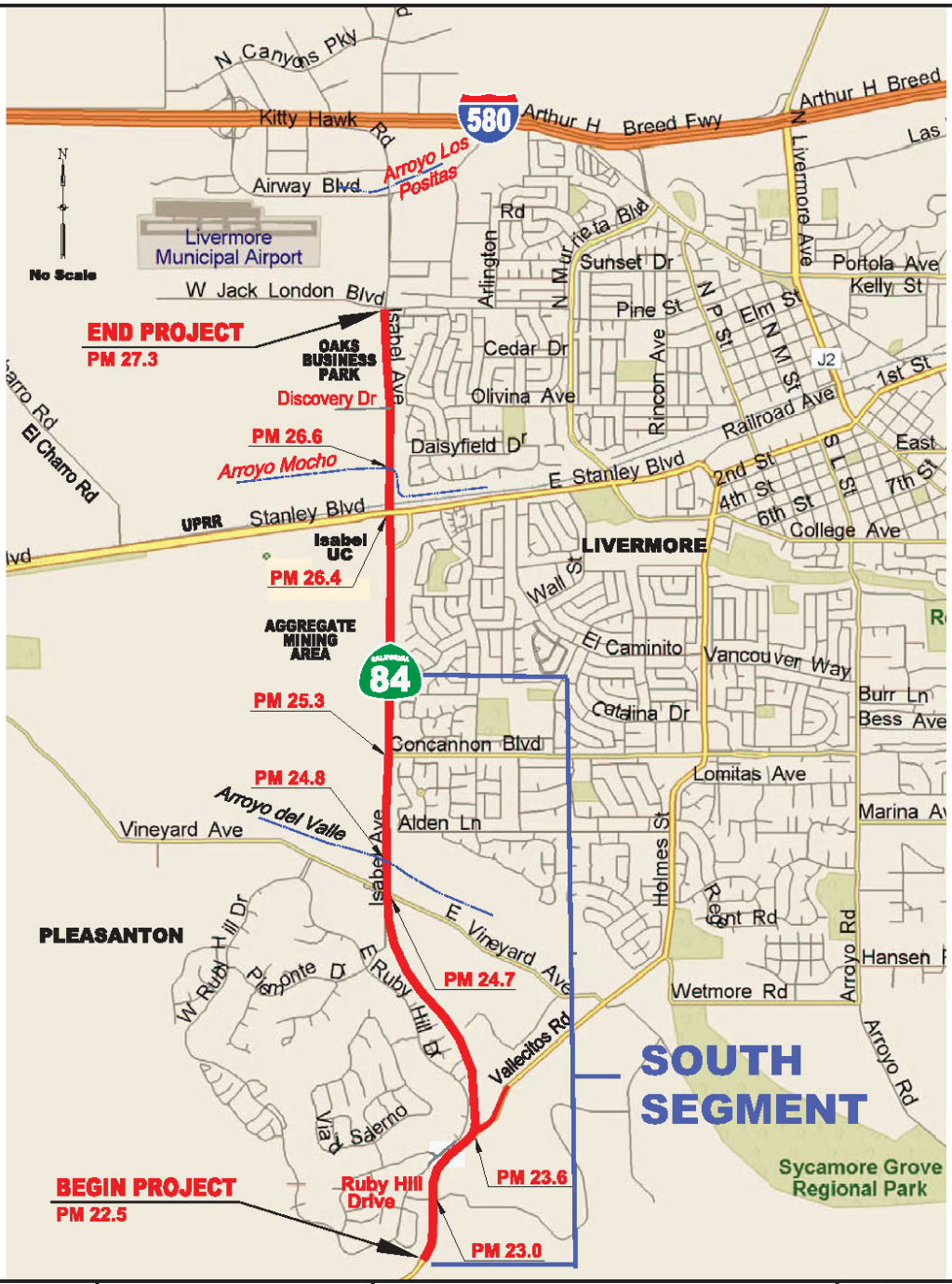
The project is not a Project of Air Quality Concern because it would not result in a substantial increase in diesel truck traffic.

- The project would add one lane in each direction in the South Segment but would not result in a significant increase in diesel vehicles.
- In both 2015 and 2035, truck percentages with the project would either decrease or remain the same compared to the No Build scenario.
- Approximately half of total truck AADT for both No Build and Build in 2015 and 2035 is expected to consist of two-axle trucks.
    - The project would increase total truck AADT by a maximum of 122 in 2015 and 242 in 2035.
    - Of those, trucks with three or more axles would comprise no more than approximately 60 trucks per day in 2015 and 120 trucks per day in 2035.
    - In light of the overall volumes, this increase would not be considered significant under 40 CFR 93.123(b)(1).
- The additional capacity from the project would primarily serve automobile traffic.

Finally, the project area is not included in the Bay Area Air Quality Management District's Community Air Risk Evaluation (CARE) program, which identifies Bay Area communities that are disproportionately impacted by emissions from transportation and stationary sources.



URS	ROUTE 84 EXPRESSWAY WIDENING ALA 84 - PM 22.5 / 27.3 04 - 297600	SITE LOCATION MAP	September 2005 Figure 1



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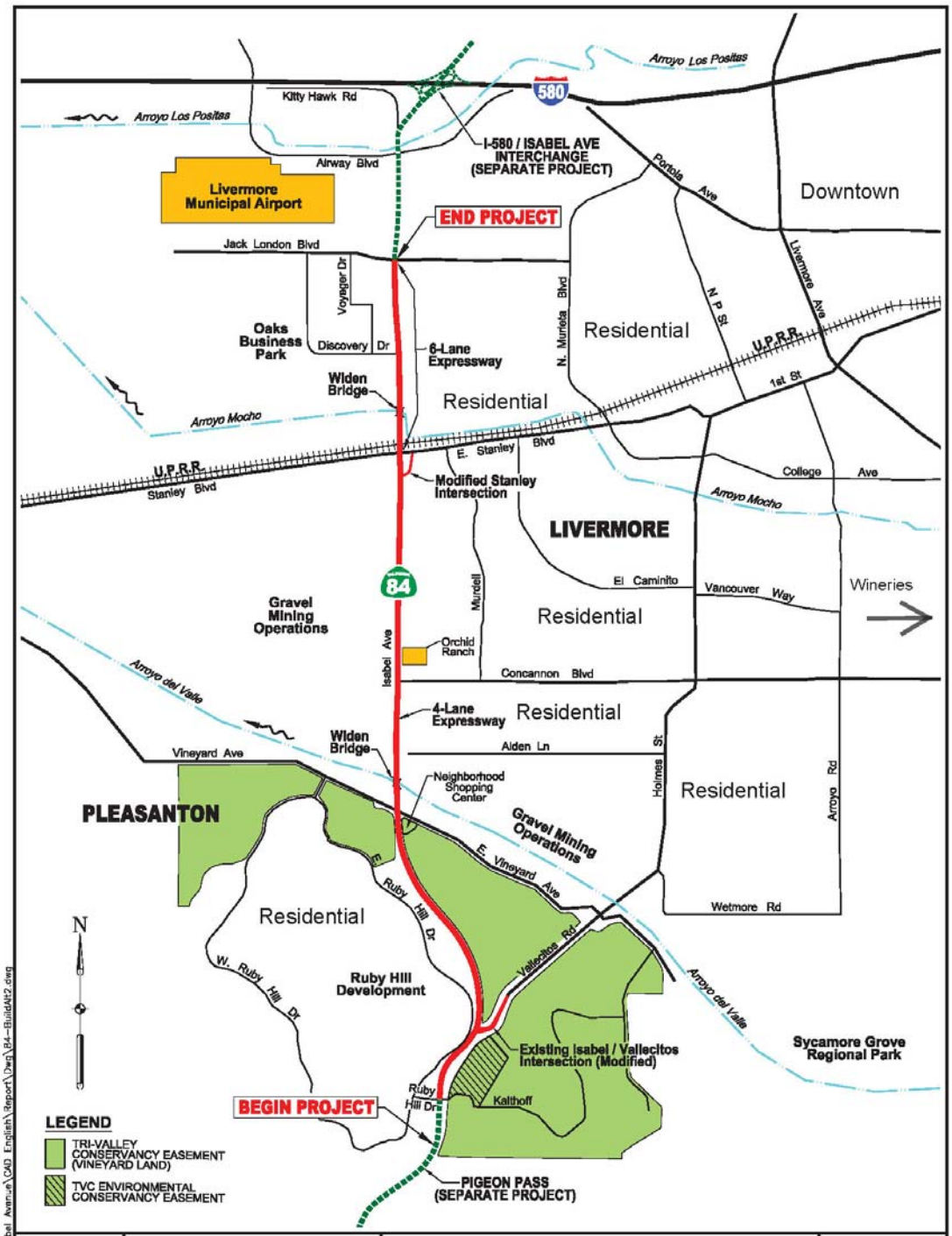
URS	ROUTE 84 EXPRESSWAY WIDENING ALA 84 - PM 22.5 / 27.3 04 - 297600	VICINITY MAP	NTS Figure 2



URS

ROUTE 84 EXPRESSWAY WIDENING
ALA 84 - PM 22.5 / 27.3
04 - 297600

EXISTING LAND USE AND BUILD ALTERNATIVE

Figure 3

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