Attachment A
Project Assessment Form for $PM_{2.5}$ Interagency Consultation

Project Title: US 101 Auxiliary Lanes

Project Summary for Air Quality Conformity Task Force Meeting: (November 2011)

Description

The project proposes to add auxiliary lanes in both directions of US 101, from the Embarcadero Road Interchange (PM 52.2) In the City of Palo Alto in Santa Clara County to the Marsh Road Interchange (PM 3.6) in the City of Menlo Park in San Mateo County.

Background

- NEPA process for Initial Study with Negative Declaration/Environmental Assessment (ND/EA) is complete
- Seeking air quality conformity determination on or before December 2011
- Schedule based on a commitment to the CTC to deliver CMIA project

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?

- No change in truck percentages on US 101
- For Year 2015 the highest truck percent is 1.89% and highest truck volume for both directions combined is 3884 AADT
- For Year 2035 the highest truck percent is 1.89% and highest truck volume for both directions combined is 3950 AADT

(ii) Affects intersections at LOS D, E, or F with a significant number of diesel vehicles?

- Heavy duty diesel vehicles represent 1.66 to 1.89% of total traffic volume
- Ramp LOS's do not show improvement however vehicle-hours of delay show improvements for the corridor under the build scenario for both 2015 and 2035
- No projected changes to land use that would affect diesel traffic percentage

(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?

- No state implementation plan for $PM_{2.5}$ (due by December 2012)
- Therefore, not identified in plan as an area of potential violation

Project Assessment Form for $PM_{2.5}$ Interagency Consultation

RTIP ID# *21608*

TIP ID# *SM-030001*

Air Quality Conformity Task Force Consideration Date
November 2011

Project Description
The project proposes to add auxiliary lanes in both directions of US 101, from the Embarcadero Road Interchange (PM 52.2) In the City of Palo Alto in Santa Clara County to the Marsh Road Interchange (PM 3.6) in the City of Menlo Park in San Mateo County. In addition to the auxiliary lanes, other major components of the project include:

- Replacement of the Ringwood Avenue Pedestrian Overcrossing to provide sufficient clearances for the proposed auxiliary lanes.
- Widening of the Hetch Hetchy Aqueduct Bridge.

Realignment of existing off-ramps and on-ramps, widening of on-ramps within the existing soundwalls, modification of the existing ramp metering system and installation of Intelligent Transportation System equipment.

The Initial Study with Negative Declaration/ Environmental Assessment can be found at:
http://www.dot.ca.gov/dist4/envdocs.htm
(Under San Mateo County, go to "Route 101 Auxiliary Lanes Embarcadero to Marsh Final Env. Doc.")

Type of Project:
Change to an existing State highway

County	**Narrative Location/Route & Postmiles**
San Mateo/Santa Clara	**SM-101 PM 0.0/3.6** **SCL-101 PM52.2/52.6** **Caltrans Projects – EA#** 235610

Lead Agency: Caltrans

Contact Person	**Phone#**	**Email**
Ron Moriguchi	510-286-5073	Ron_moriguchi@dot.ca.gov

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 2012

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

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

Current Programming Dates *(as appropriate)*

	PE/Environmental	**ENG**	**ROW**	**CON**
Start	2/08	10/08	10/08	6/11
End	10/08	8/11	7/11	9/15

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Project Purpose and Need (Summary): *(please be brief)*
The addition of auxiliary lanes will relieve congestion on mainline US 101 within the project limits.

Surrounding Land Use/Traffic Generators *(especially effect on diesel traffic)*
This segment of Route 101 runs along the San Francisco Peninsula, serving the cities of Menlo Park, Palo Alto, and East Palo Alto. It is heavily used throughout the day and is at full capacity during morning and afternoon peak periods. This section of route 101 has experienced an increase in traffic demand as a result of the growth and expansion of high technology industry along the corridor, and an increase in the number of commuters traveling to this area from the East Bay via Route 84.

Brief summary of assumptions and methodology used for conducting analysis Truck percentages were taken from 2009 Annual Average Daily Truck Traffic on the California State Highway System (December 2010). Association of Bay Area Governments land use forecasts show no change in land use for the project area, so truck percentages are predicted to remain constant. Total volumes are based on a regional transportation demand model for San Mateo and Santa Clara counties.

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

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
See Attached

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Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT N/A **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** N/A
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 N/A **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** N/A
Describe potential traffic redistribution effects of congestion relief *(impact on other facilities)* **Route 101 is a main thoroughfare for traffic between San Jose and San Francisco. The only other routes are El Camino Real (urban street) and Route 280. This project is an operational improvement to route 101. It is not expected to affect traffic on the other routes because El Camino is signalized and Route 280 is far away from Route 101.**

$PM_{2.5}$ Project Assessment Form for Interagency Consultation

Comments/Explanation/Details *(please be brief)*
This project is not a Project of Air Quality Concern as defined in 40 CFR 93.123(b)(1), because the following reasons:

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

- No change in truck percentages on US 101
- For Year 2015 the highest truck percent is 1.89% and highest truck volume for both directions combined is 3884 AADT
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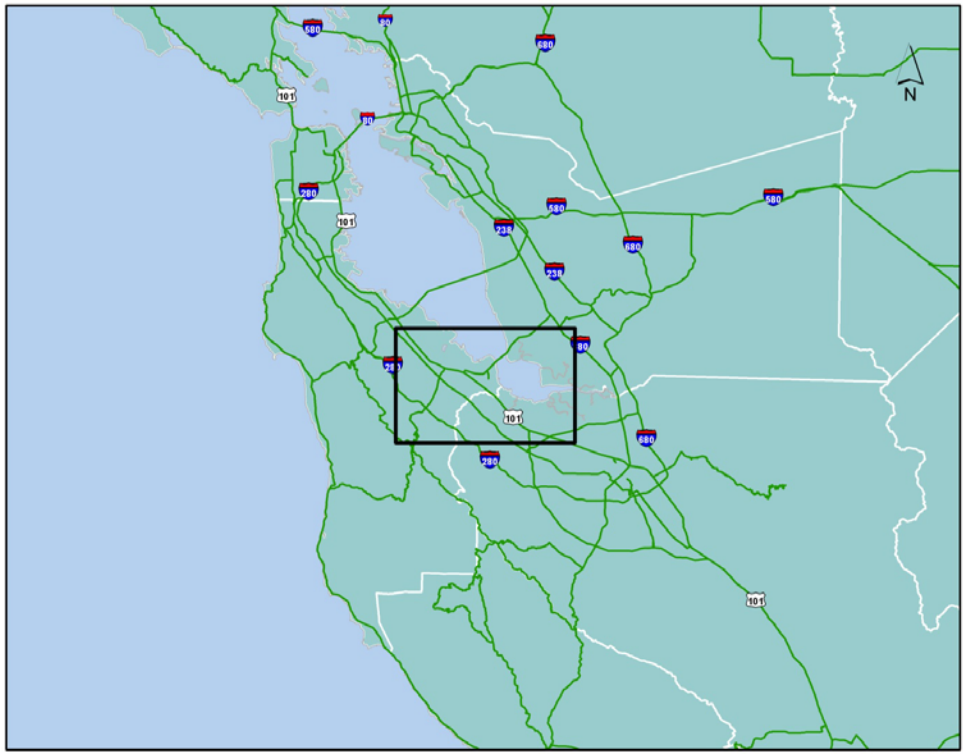
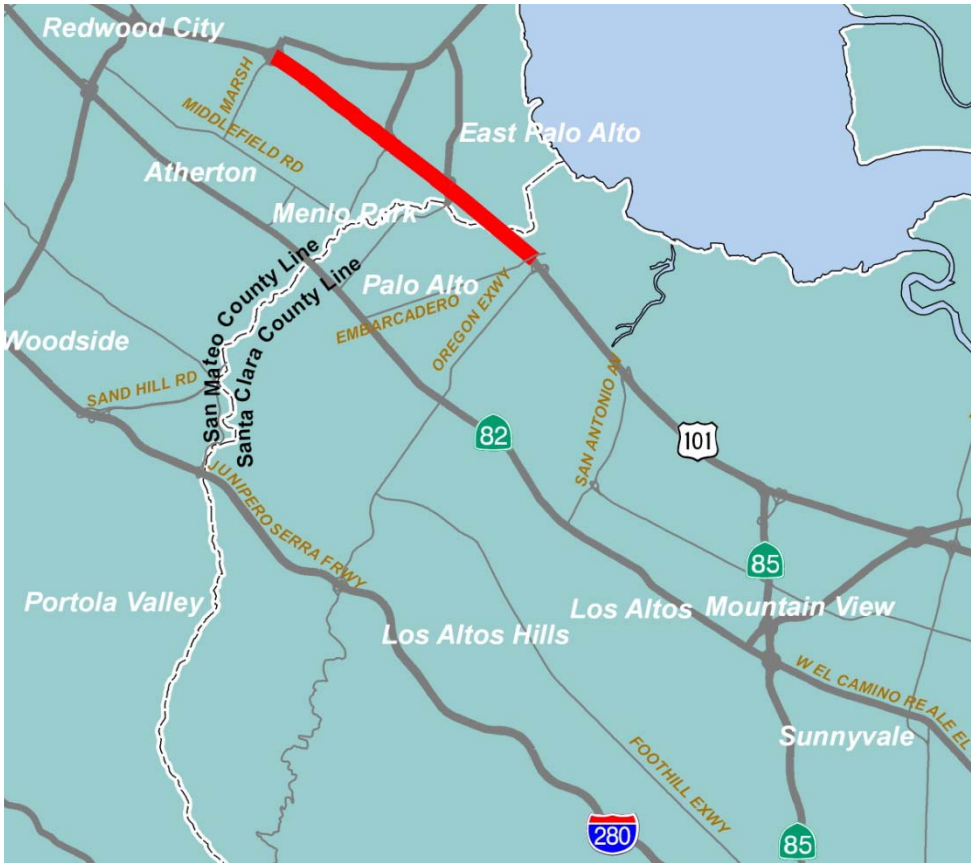
Attachments

Location Map
Traffic Data
Project Layout
Land Uses

Location Map





Traffic Data

Year of Open to Traffic (2015)

Northbound 101 No-Build

Northbound 101	Total AADT	%Truck 3-Axle & Above	AADT Truck 3-Axle & Above
Embarcadero to Willow	105,726	1.66	1750
Willow to Marsh	96,874	1.89	1835
Marsh to Woodside	106,113	1.80	1909

Northbound 101 Build

Northbound 101	Total AADT	%Truck 3-Axle & Above	AADT Truck 3-Axle & Above
Embarcadero to Willow	106,753	1.66	1767
Willow to Marsh	97,749	1.89	1852
Marsh to Woodside	105,935	1.80	1905

Southbound 101 No-Build

Southbound 101	Total AADT	%Truck 3-Axle & Above	AADT Truck 3-Axle & Above
Woodside to Marsh	109,836	1.80	1975
Marsh to Willow	94,468	1.89	1789
Willow to Embarcadero	103,951	1.66	1721

Southbound 101 Build

Southbound 101	Total AADT	%Truck 3-Axle & Above	AADT Truck 3-Axle & Above
Woodside to Marsh	109,774	1.80	1975
Marsh to Willow	96,309	1.89	1824
Willow to Embarcadero	106,775	1.66	1768

Sum of the Volumes of Both Directions

No-Build

	Total AADT	AADT Truck 3-Axle & Above
Between Woodside and Marsh	215,949	3884
Between Marsh and Willow	191,342	3624
Between Willow and Embarcadero	209,667	3471

Build

	Total AADT	AADT Truck 3-Axle & Above
Between Woodside and Marsh	215,709	3880
Between Marsh and Willow	194,058	3676
Between Willow and Embarcadero	213,528	3535

LOS for Year of Opening (2015)

	2015 No Build		2015 Build	
	NB AM	NB PM	NB AM	NB PM
Northbound US 101	LOS	LOS	LOS	LOS
San Antonio On to Embarcadero/Oregon Off	D	F	D	D
Embarcadero/Oregon Off to On	D	F	D	E
Embarcadero/Oregon On to Lane Add	D	E	C	D
Lane Add to University Off	C	D	C	D
University Off to University On	D	D	D	E
University On to Willow Diagonal Off	E	E	C	D
Willow diagonal Off to Willow Loop On	D	D	D	E
Willow Loop On to Willow Loop Off	C	C	C	D
Willow Loop Off to Willow Diagonal On	D	D	D	E
Willow Diagonal On to Marsh Off	D	D	C	D
Marsh Off to Marsh Loop On	C	D	C	D
Marsh Loop On to Marsh Diagonal On	D	D	D	E
Marsh Diagonal On to Woodside Off	D	D	D	D
Vehicle-Hours of Delay	0	357	0	0

	2015 No Build		2015 Build	
	SB AM	SB PM	SB AM	SB PM
Southbound US 101	LOS	LOS	LOS	LOS
Woodside On to Marsh Off	F	F	F	F
Marsh Off to Marsh Loop On	F	F	F	F
Marsh Loop On to Marsh Diagonal On	F	F	F	F
Marsh Diagonal On to Willow Diagonal Off	F	F	F	F
Willow Diagonal Off to Willow Loop On	F	F	F	F
Willow Loop On to Willow Loop Off	F	F	F	F
Willow Loop Off to Willow Diagonal On	F	F	F	E
Willow Diagonal On to Lane Add	F	F	F	D
Lane Add to University Off	F	F	F	D
University Off to University On	F	F	F	D
University On to Embarcadero/Oregon Off	E	E	E	D
Embarcadero/Oregon Off to On	D	D	D	D
Embarcadero/Oregon On to San Antonio Off	C	D	D	D
Vehicle-Hours of Delay	757	299	165	95

Horizon Year (2035)

Northbound 101 No-Build

Northbound 101	Total AADT	%Truck 3-Axle & Above	AADT Truck 3-Axle & Above
Embarcadero to Willow	109,431	1.66	1811
Willow to Marsh	96,046	1.89	1856
Marsh to Woodside	105,366	1.80	1895

Northbound 101 Build

Northbound 101	Total AADT	%Truck 3-Axle & Above	AADT Truck 3-Axle & Above
Embarcadero to Willow	112,323	1.66	1860
Willow to Marsh	100,282	1.89	1900
Marsh to Woodside	104,634	1.80	1881

Southbound 101 No-Build

Southbound 101	Total AADT	%Truck 3-Axle & Above	AADT Truck 3-Axle & Above
Woodside to Marsh	114,254	1.80	2055
Marsh to Willow	92,710	1.89	1757
Willow to Embarcadero	109,572	1.66	1814

Southbound 101 Build

Southbound 101	Total AADT	%Truck 3-Axle & Above	AADT Truck 3-Axle & Above
Woodside to Marsh	113,963	1.80	2049
Marsh to Willow	97,783	1.89	1852
Willow to Embarcadero	117,530	1.66	1946

Sum of the Volumes of Both Directions

No-Build

	Total AADT	AADT Truck 3-Axle & Above
Between Woodside and Marsh	219,620	3950
Between Marsh and Willow	188,756	3613
Between Willow and Embarcadero	219,003	3625

Build

	Total AADT	AADT Truck 3-Axle & Above
Between Woodside and Marsh	218,597	3930
Between Marsh and Willow	198,065	3752
Between Willow and Embarcadero	229,853	3806

LOS for Horizon Year (2035)

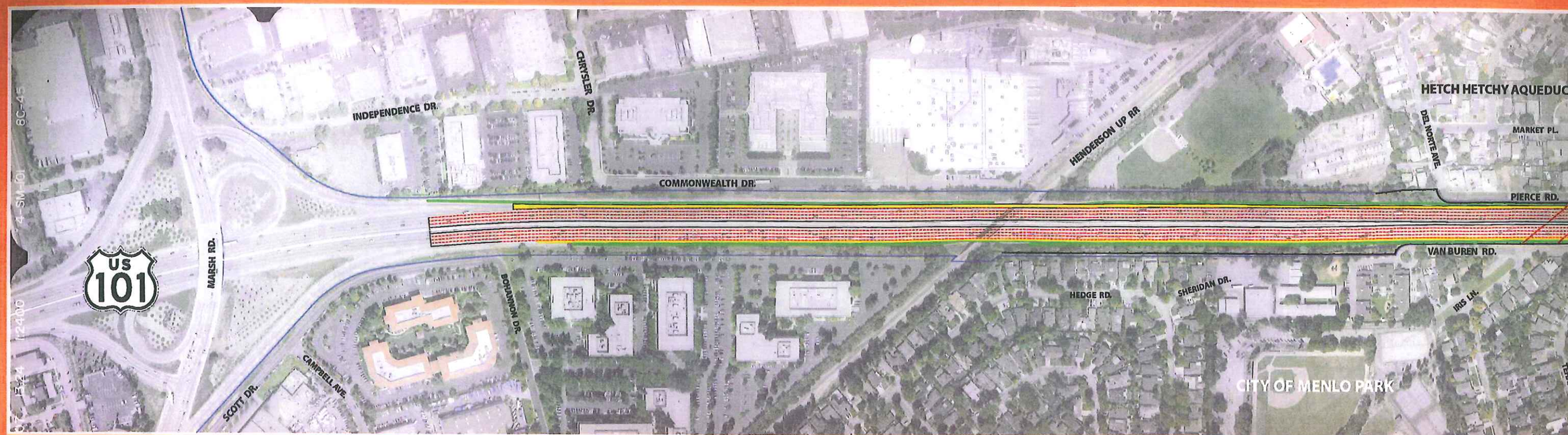
	2035 No Build		2035 Build	
	NB AM	NB PM	NB AM	NB PM
Northbound US 101	LOS	LOS	LOS	LOS
San Antonio On to Embarcadero/Oregon Off	D	F	D	F*
Embarcadero/Oregon Off to On	D	F	D	F
Embarcadero/Oregon On to Lane Add	E	E	D	F
Lane Add to University Off	C	F	D	F
University Off to University On	D	F	D	F
University On to Willow Diagonal Off	E	E	D	F
Willow diagonal Off to Willow Loop On	D	D	D	F
Willow Loop On to Willow Loop Off	C	C	C	F
Willow Loop Off to Willow Diagonal On	D	D	C	F
Willow Diagonal On to Marsh Off	D	E	C	F
Marsh Off to Marsh Loop On	C	D	D	F
Marsh Loop On to Marsh Diagonal On	D	E	D	E
Marsh Diagonal On to Woodside Off	D	D	D	D
Vehicle-Hours of Delay	26	1114	0	579
	2035 No Build		2035 Build	
	SB AM	SB PM	SB AM	SB PM
Southbound US 101	LOS	LOS	LOS	LOS
Woodside On to Marsh Off	F	F	F	E
Marsh Off to Marsh Loop On	F	F	F	D
Marsh Loop On to Marsh Diagonal On	F	F	F	E
Marsh Diagonal On to Willow Diagonal Off	F	F	F	D
Willow Diagonal Off to Willow Loop On	F	F	F	E
Willow Loop On to Willow Loop Off	F	F	F	D
Willow Loop Off to Willow Diagonal On	F	F	F	D
Willow Diagonal On to Lane Add	F	F	F	D
Lane Add to University Off	F	F	F	D
University Off to University On	F	F	F	D
University On to Embarcadero/Oregon Off	E	E	E	D
Embarcadero/Oregon Off to On	C	D	D	D
Embarcadero/Oregon On to San Antonio Off	C	D	D	D
Vehicle-Hours of Delay	1438	632	648	296

Project Layout

US 101 AUXILIARY LANES P

EMBARCADERO ROAD TO MARSH RO

04-SCL-PM 52.2/52.6 - 04-SM-PM 0.0/3.6



LEGEND

- PROPOSED AUXILIARY LANES
- PROPOSED SHOULDER
- PROPOSED RAMPS AND GORE AREAS
- RIGHT OF WAY ACCESS CONTROL
- EXISTING SOUND WALL

ROJECT
AD

MATCH LINE

MATCH LINE

Caltrans

CT1806 | DISTRICT 4 AUDIO VISUAL GRAPHIC SERVICES | EA 235610 | 06/2008

US 101 AUXILIARY LANES

EMBARCADERO ROAD TO MARSH

04-SCL-PM 52.2/52.6 - 04-SM-PM 0.0/3.6

MATCH LINE

MATCH LINE

LEGEND

- PROPOSED AUXILIARY LANES
- PROPOSED SHOULDER
- PROPOSED RAMPS AND GORE AREAS
- RIGHT OF WAY ACCESS CONTROL
- EXISTING SOUND WALL

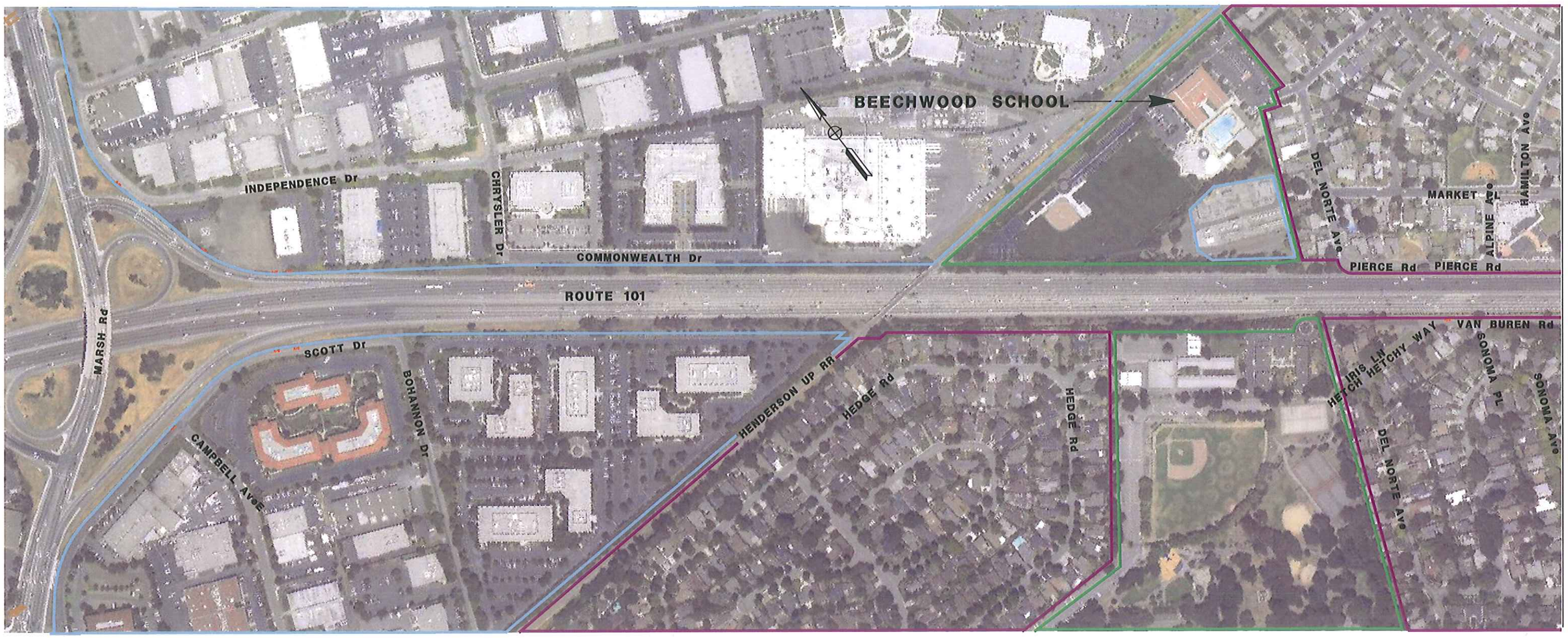
ES PROJECT
H ROAD

MATCH LINE

Caltrans

CT1806 | DISTRICT 4 AUDIO VISUAL GRAPHIC SERVICES | EA 235610 | 06/2008

Land Uses

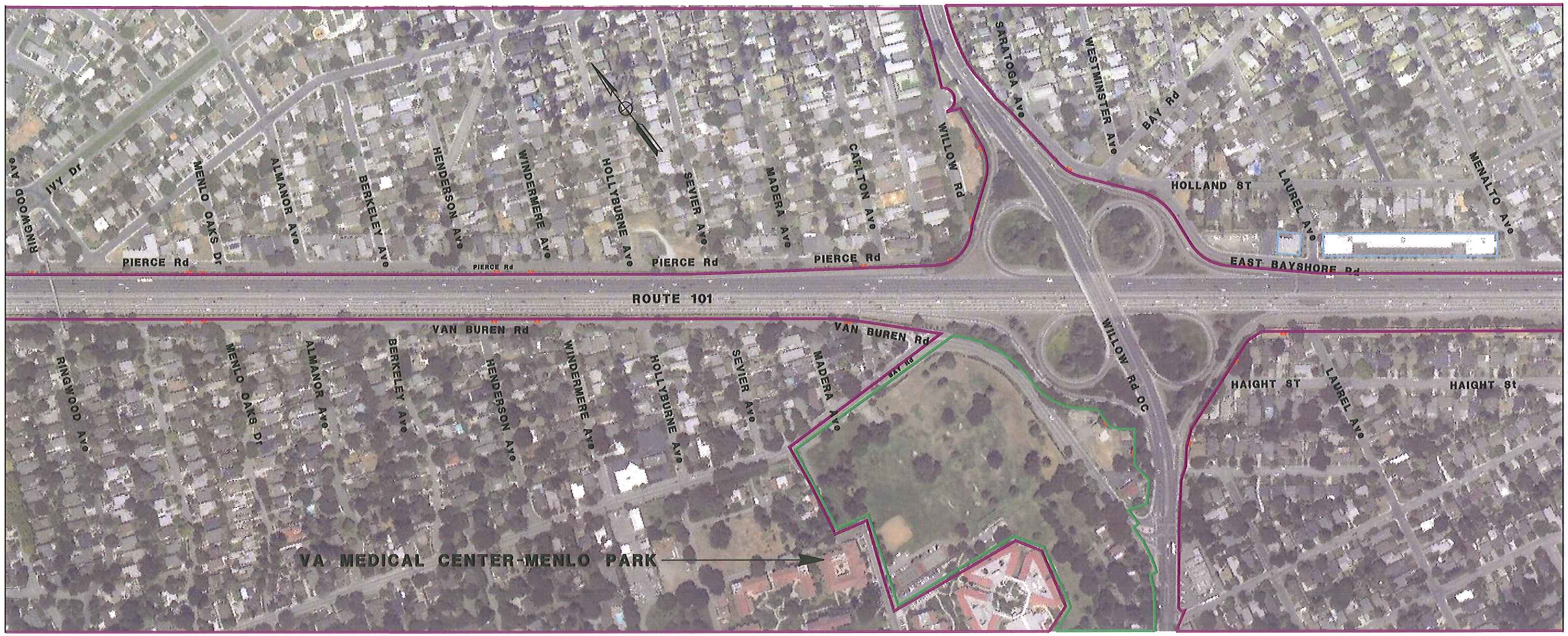


MATCH LINE, SEE 2 OF 4

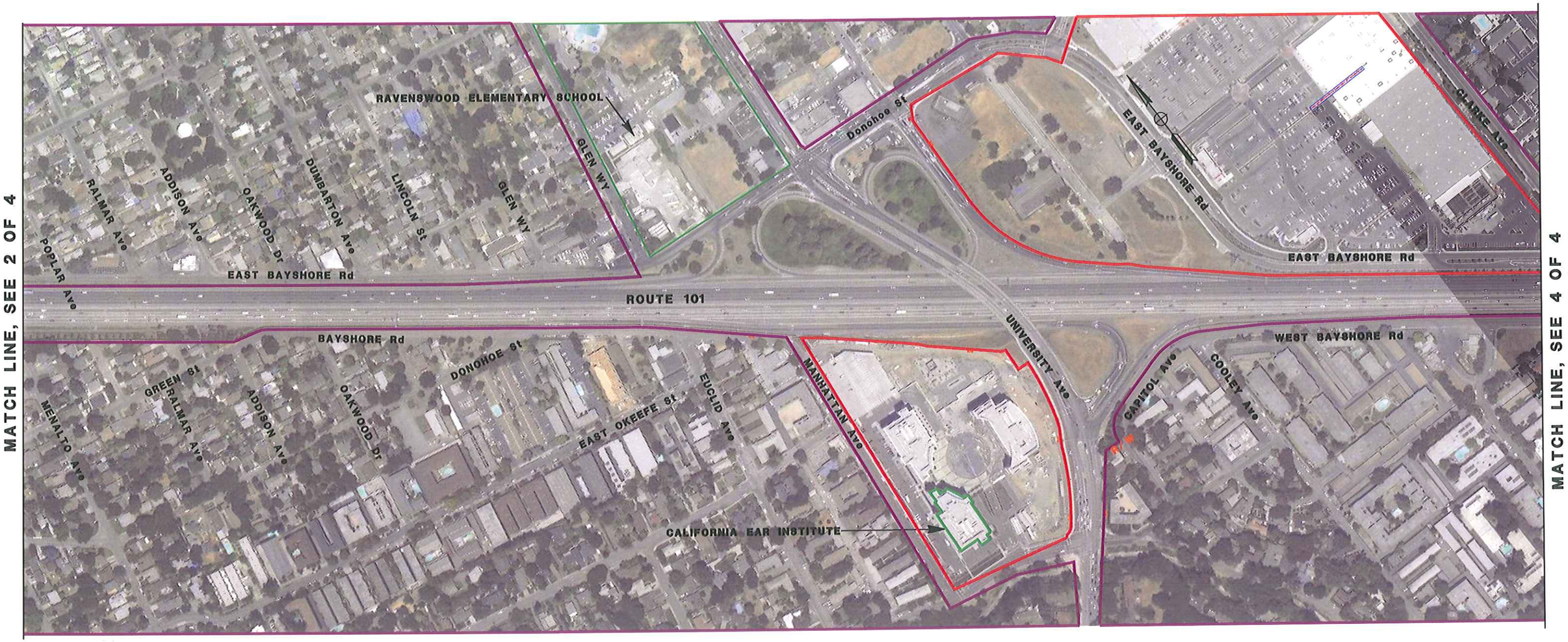
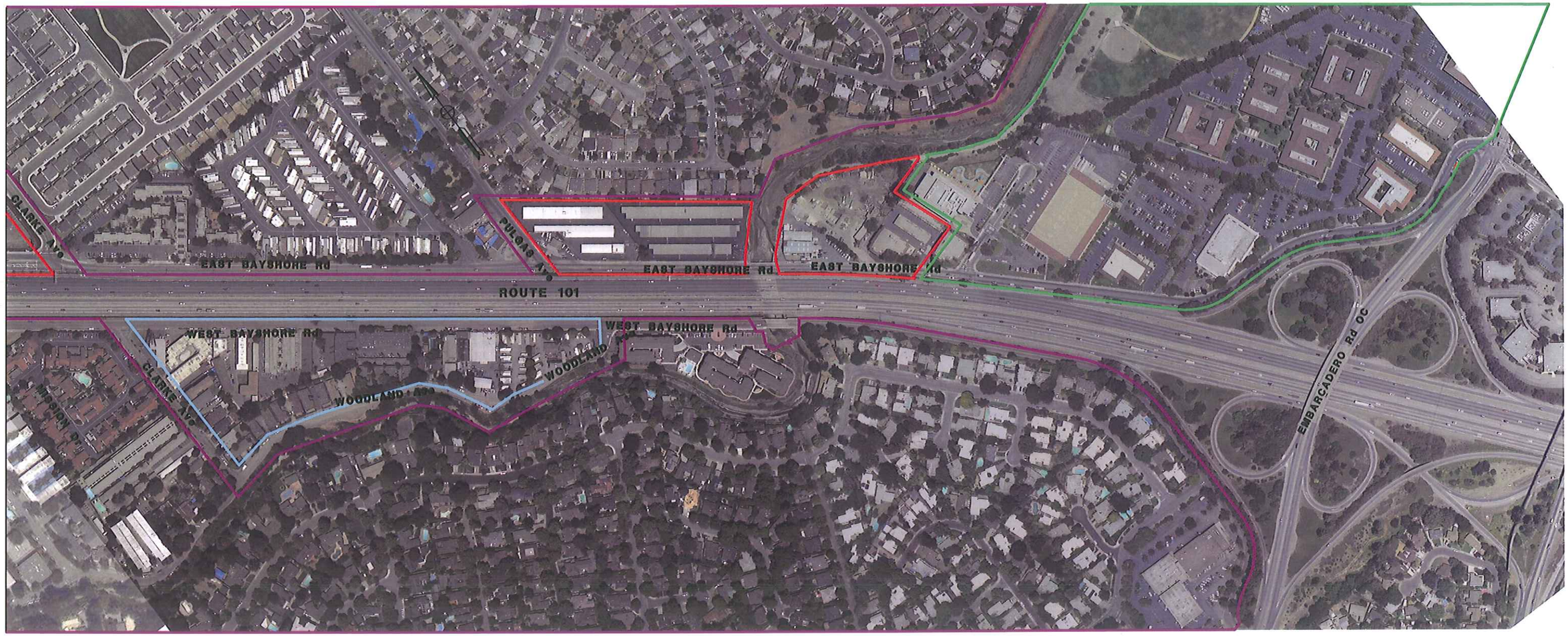
LEGEND

- INDUSTRIAL
- PARKS & INSTITUTIONAL
- RESIDENTIAL
- COMMERCIAL

MATCH LINE, SEE 1 OF 4



MATCH LINE, SEE 3 OF 4


MATCH LINE, SEE 2 OF 4
MATCH LINE, SEE 4 OF 4
RAVENSWOOD ELEMENTARY SCHOOL
GLEN WY
Donohoe St
EAST BAYSHORE Rd
CLARKE Ave
RALMAR Ave
ADDISON Ave
OAKWOOD Dr
DUMBARTON Ave
LINCOLN St
POPLAR Ave
ROUTE 101
BAYSHORE Rd
UNIVERSITY Ave
WEST BAYSHORE Rd
GREEN St
MENALTO Ave
EAST OKEEFE St
EUCLID Ave
MANHATTAN Ave
CAPITOL Ave
COOLEY Ave
CALIFORNIA EAR INSTITUTE

MATCH LINE, SEE 3 OF 4