

# ATTACHMENT A

## TRAFFIC ENGINEERING PERFORMANCE ASSESSMENT (TEPA)

Final

# **Riego Road – Baseline Road**

Traffic Engineering Performance Assessment

July 2020

FEHR  PEERS

RS20-3896

## 1.0 INTRODUCTION

This report presents the traffic engineering performance assessment (TEPA) in support of the Riego Road-Baseline Road Project Study Report (PSR) Equivalent. The intent of this TEPA report is to use readily-available information to provide a technical foundation for developing a preliminary purpose and need statement for the proposed project and to outline the scope and magnitude of the more detailed analyses to be conducted as part of subsequent project development efforts.

### PROJECT PURPOSE

The purpose of this project is to add capacity along this 12-mile inter-regional corridor to better serve existing travelers and support planned land development along it. The project will also provide dedicated bicycle and pedestrian facilities to accommodate active modes of transportation. Additionally, the project would address traveler needs to access Sacramento International Airport from South Placer County, and would connect major residential and jobs centers in Placer and Sacramento Counties.

### TRAFFIC STUDY AREA

The study area extends from State Route (SR) 99 in unincorporated Sutter County, through unincorporated Placer County, and into the City of Roseville, terminating at Foothills Boulevard.

### DATA SOURCES AND REFERENCE DOCUMENTS

The following technical data sources were primarily used in the preparation of this document:

- *Sunset Area Plan and Placer Ranch Specific Plan Final Transportation Impact Study*, Fehr & Peers, December 2018.
- Traffic counts and analyses prepared by Fehr & Peers in 2019-2020 within the western and central portions of the study corridor.

Additionally, policies and related information contained within the General Plans of Sutter County, Placer County, and the City of Roseville were also used. Data from other sources such as the *Amoruso Ranch Specific Plan Transportation Impact Study* (Fehr & Peers, 2015), Federal Railroad Administration, Placer County, City of Roseville, and Sutter County websites were also used.

## REPORT ORGANIZATION

The remainder of this report is organized into the following sections:

- *Chapter 2 – Existing Conditions* summarizes the current peak hour traffic for the study area, and also presents the analysis results for selected intersections along the corridor
- *Chapter 3 – Project Alternatives* describes the concepts for the No Build and Build Alternatives
- *Chapter 4 – Design Year Conditions* summarizes preliminary estimates of design year peak hour traffic volumes and operations under the No Build and Build Alternatives
- *Chapter 5 –Transportation Analysis for the PA-ED Phase* describes the scope of work for the more detailed studies to be conducted at the PA-ED phase of project development
- *Chapter 6 – Summary* recaps the key findings that will inform the development of the purpose and need statement for the project

## ANALYSIS METHODOLOGY

Level of service (LOS) is reported for intersections and roadway segments throughout the study corridor. LOS is a qualitative measure of traffic operating conditions whereby a letter rating, from A (the best) to F (the worst), is assigned. These ratings represent the perspective of drivers and are an indication of the comfort and convenience associated with driving. The descriptions and delay ranges of each LOS letter rating for signalized and unsignalized intersections are provided in **Table 1**.

Analyses presented here were conducted entirely as part of other studies, and not part of this study. Those analyses were performed using both microsimulation (i.e., SimTraffic microsimulation model) and deterministic methods (i.e., Synchro software that applies *Highway Capacity Manual*, Transportation Research Board, 2010 methods). Synchro considers traffic volumes, lane configurations, signal timings, and other parameters, but does not directly consider the effects of adjacent intersections and queue spillbacks. It is best used in areas that are under capacity and not influenced by adjacent intersections. SimTraffic considers interactions between adjacent intersections, turn lane spillbacks, coordinated signal timing, and upstream/downstream bottlenecks. SimTraffic is preferable to use when operating conditions are near capacity, turn lane storage exceedance is common. In the reviewed studies, SimTraffic was applied for the all-way stop intersections in the western/central portion of the corridor, while Synchro was applied elsewhere.



**Table 1:  
Level of Service Definitions – Intersections**

Level of Service	Description (for Signalized Intersections)	Average Control Delay <sup>1</sup>	
		Signalized Intersections	Unsignalized Intersections
A	Volume-to-capacity ratio is low and either progression is exceptionally favorable or cycle length is very short. Most vehicles arrive during the green phase and travel through the intersection without stopping.	≤ 10	≤ 10
B	Volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.	> 10 to 20	> 10 to 15
C	Progression is favorable or the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	>20 to 35	> 15 to 25
D	Volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.	>35 to 55	>25 to 35
E	Volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.	>55 to 80	>35 to 50
F	Volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	>80	>50

Notes:

1. Average control delay presented in seconds per vehicle. Delay values are rounded to the nearest second and evaluated for LOS based on the above thresholds (i.e., 10 seconds per vehicle = LOS A)

Source: *Highway Capacity Manual 2010*, Transportation Research Board, 2010.

**Table 2** displays the daily traffic volume LOS thresholds for various roadway facility types in each of the study area jurisdictions. Note that the City of Roseville does not utilize LOS thresholds to evaluate daily roadway segment operations; instead, they focus on peak hour intersection operations.

**Table 2: LOS Criteria – Roadway Segments<sup>1</sup>**

Jurisdiction	Facility Type	Lanes & Classification	Daily Volume Threshold				
			LOS A	LOS B	LOS C	LOS D	LOS E
Sutter County	Rural Roadway	2 (2R)	-	-	7,200	12,200	20,800
	Urban Arterial	4 (4U)	-	-	17,520	19,700	21,900
	Expressway	4 (4E)	-	-	39,510	44,460	49,395
Placer County	Arterial – Moderate Access Control <sup>2</sup>	2 (2M)	10,800	12,600	14,400	16,200	18,000
		4 (4M)	21,600	25,200	28,800	32,400	36,000
		6 (6M)	32,400	37,800	43,200	48,600	54,000
	Arterial – High Access Control <sup>3</sup>	4 (4H)	24,000	28,000	32,000	36,000	40,000

Notes:

<sup>1</sup> Both lanes and daily volume thresholds are two-way totals.

<sup>2</sup> Medium access control roads generally have limited driveways and speeds of 30 to 35 mph.

<sup>3</sup> High access control roads generally have no driveways and speeds of 35 to 50 mph.

Source: Sutter County General Plan, 1996 and Placer County General Plan, 1994.

## TRAFFIC OPERATIONS STANDARDS

### Sutter County

The *Sutter County 2030 General Plan* (March 2011) establishes a **LOS D threshold** for its roadway segments and intersections during peak hours, and LOS C at all other times.

### Placer County

Policy 3.A.7 in the *Placer County General Plan* (May 2013) establishes a minimum LOS C standard for County roadways and intersections, except within one-half mile of state highways where the standard shall be LOS D. Policy 3.A.7 also acknowledges that a community or specific plan may specify a different minimum LOS standard. The Dry Creek/West Placer Community Plan includes the following LOS standard:

*“The Capital Improvement Program (CIP) shall be sufficient to maintain LOS D on the Community Plan area roadway network – given the projected buildout of the Community Plan area and implementation of the CIP, except for the following arterial roadways, roadway segments, and intersections that will operate at the listed LOS when fully improved.*

- *Baseline Road – Sutter County Line to Walerga/Fiddymont Road: LOS E*

It should be noted that the LOS E standard for Baseline Road applies when it is “fully improved.” Since Baseline Road is not yet “fully improved” to its ultimate configuration, this study applies the Placer County General Plan **LOS C standard for existing conditions, but LOS E standard for cumulative conditions.**

#### City of Roseville

The City of Roseville’s 2020 *General Plan* (Adopted August 2020) contains the following level of service goals and policies:

- Goal CIRC2      Maintain an appropriate level of transportation service for all of Roseville's residents, employees, and consumers through a balanced transportation system that considers automobiles, transit, bicyclists, and pedestrians.
  
- Policy CIRC2.1    Maintain a LOS "C" standard at a minimum of 70 percent of all signalized intersections and roadway segments in the City during the a.m. and p.m. peak hours. Exceptions to the LOS "C" standard may be considered where improvements required to achieve the standard would adversely affect pedestrian, bicycle, or transit access, and where feasible LOS improvements and travel demand-reducing strategies have been exhausted.
  
- Policy CIRC2.2    Strive to meet the level of service standard through a balanced transportation system that reduces the auto emissions that contribute to climate change, by providing alternatives to the automobile and avoiding excessive vehicle congestion through roadway improvements, Intelligent Transportation Systems, and transit improvements.
  
- Policy CIRC2.3    Work with neighboring jurisdictions to provide acceptable and compatible levels of service on the roadways that cross the City's boundaries.

## 2.0 EXISTING CONDITIONS

This chapter describes the relevant current operating conditions of the traffic study area using readily available data. A more detailed evaluation of existing conditions will be conducted as part of subsequent project phases.

Between SR 99 and the Roseville City limits, Riego Road-Baseline Road is generally a two-lane undivided roadway with a posted speed limit of 55 mph. Portions of the roadway allow for passing in the opposing lane. Dedicated left-turn lanes are not provided along this segment with the exception of the signalized intersection at Watt Avenue. Within Roseville, two westbound lanes and one eastbound lane are provided separated by a two-way left-turn lane with a posted speed limit of 45 mph.

### TRAFFIC VOLUMES AND OPERATIONS

**Table 3** displays the average daily traffic (ADT) volumes on segments of the study corridor. These counts were collected between 2016 and 2019.

**Table 3: Roadway Segment Daily Volumes and Operations – Existing Conditions**

Jurisdiction	Roadway Segment	Existing Conditions				
		LOS Standard	Lanes	Classification <sup>1</sup>	ADT	LOS / V/C Ratio
Sutter County	Riego Road – SR 99 to Locust Road	D	2	2R	11,300	D / 0.54
Placer County	Baseline Road – Locust Road to Watt Ave	C	2	2M	13,100	C / 0.73
	Baseline Road – Watt Avenue to Fiddymont Road / Walerga Road	C	2	2M	19,700	F / 1.09
City of Roseville	Baseline Road – Fiddymont Road / Walerga Road to Woodcreek Oaks Boulevard	- <sup>2</sup>	3	Arterial	13,800	- <sup>2</sup>
	Baseline Road – Woodcreek Oaks Boulevard to Foothills Boulevard	- <sup>2</sup>	3	Arterial	17,900	- <sup>2</sup>

Notes:

<sup>1</sup> Based on ADT LOS thresholds for given roadway classification in Table 2

<sup>2</sup> City of Roseville does not apply a daily LOS threshold to its roadways. Note that portion of roadway on the south side is within unincorporated Placer County.

ADT = average daily traffic; LOS = level of service;

Shaded cells indicate exceedance of General Plan LOS policy.

Source: Fehr & Peers, 2020.

Existing intersection lane configurations, signal timings, and peak-hour turning movement volumes were used to calculate the levels of service for the key intersections during each peak hour. **Figure 1** shows the 12 existing intersections along the corridor that were included in this report.

**Table 4** displays the existing average delay and LOS at each intersection under weekday AM and PM peak hour conditions.

**Table 4:**  
**Intersection Level of Service – Existing Conditions**

#	Agency	Intersection	Traffic Control	LOS Standard	AM Peak Hour		PM Peak Hour	
					Delay	LOS	Delay	LOS
1	Caltrans	Riego Rd./SR 99 SB Ramps	Signal	D	8	A	7	A
2		Riego Rd./SR 99 NB Ramps	Signal	D	4	A	7	A
3	Sutter County	Riego Rd./Pacific Ave.	Side-Street Stop	D	1 (15)	A (C)	2 (16)	A (C)
4		Riego Rd./Natomas Rd.	All-Way Stop	D	23	C	23	C
5		Riego Rd./Pleasant Grove Rd. (N)	All-Way Stop	D	22	C	17	C
6		Riego Rd./Pleasant Grove Rd. (S)	All-Way Stop	D	49	E	32	D
7	Placer County	Baseline Rd./Locust Rd.	All-Way Stop	C	64	F	34	D
8		Baseline Rd./Watt Ave.	Signal	C	16	B	28	C
9	City of Roseville	Baseline Rd./Fiddymment Rd.	Signal	C <sup>1</sup>	34	C	58	E
10		Baseline Rd./Woodcreek Oaks Blvd.	Signal	C <sup>1</sup>	30	C	27	C
11		Baseline Rd./Junction Blvd.	Signal	C <sup>1</sup>	12	B	11	B
12		Baseline Rd./Main St./Foothills Blvd.	Signal	C <sup>1</sup>	35	C	37	D

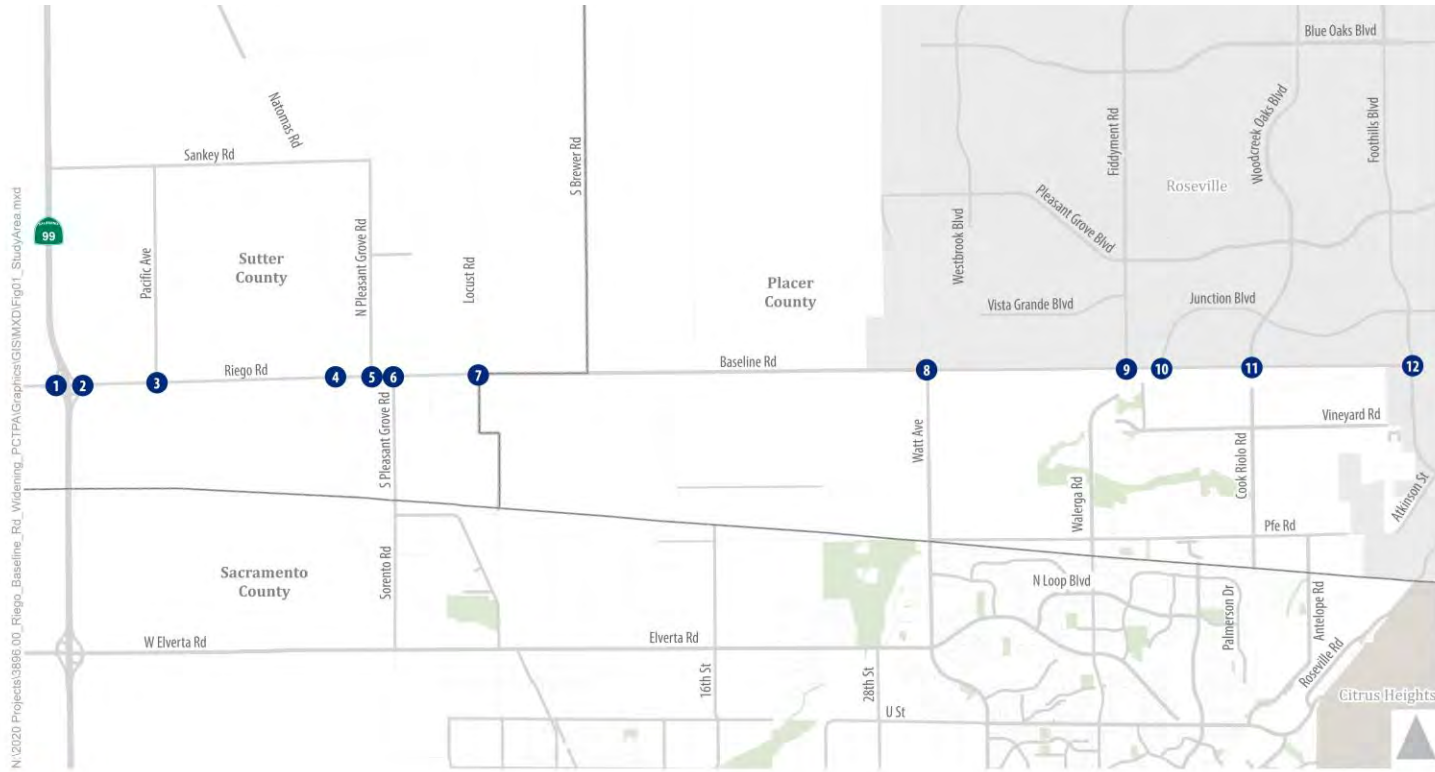
Notes:

<sup>1</sup> The City of Roseville 2020 General Plan contains the following policy:

*"Maintain a LOS "C" standard at a minimum of 70 percent of all signalized intersections and roadway segments in the City during the a.m. and p.m. peak hours. Exceptions to the LOS "C" standard may be considered where improvements required to achieve the standard would adversely affect pedestrian, bicycle, or transit access, and where feasible LOS improvements and travel demand-reducing strategies have been exhausted."*

Shaded cells indicate unacceptable operations.

Source: Fehr & Peers, 2020.



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1 Study Intersection



Figure 1  
Study Area

As shown, several intersections along the study corridor currently operate worse than the applicable LOS standard. These facilities are described below:

- Riego Road/Pleasant Grove Boulevard (S) experiences heavy westbound congestion during the AM peak hour, resulting in LOS E conditions. Much of this traffic is associated with commute travel between South Placer County and Sacramento.
- Baseline Road/Locust Road consists of stop-control on all four approaches. Heavy east/west travel contributes to lengthy queues and delays during both peak hours and unacceptable LOS.
- Baseline Road/Fiddymont Road/Walerga Road features heavy traffic volumes on all approaches. In 2019, the eastbound approach was widened to provide a second left-turn lane. As a result, the intersection operates slightly better than the LOS E condition reported in Table 4.
- Baseline Road/Foothills Boulevard/Main Street operates at the cusp of LOS C and D during both peak hours. It has been identified in the City's General Plan as operating at worse than LOS C by 2035.

## AT-GRADE RAIL CROSSING

The Union Pacific Railroad (UPRR) Sacramento Subdivision line has an at-grade railroad crossing of Riego Road located approximately 500 feet east of Natomas Road and 1,200 feet west of Pleasant Grove Boulevard South. According to data from the Federal Railroad Administration<sup>1</sup>, an average of 10 trains per day used this track based on a 2016 count. The crossing features signalized lights, two-quadrant crossing arms, advanced warning signs, and pavement markings.

## TRUCK ROUTES

SR 99 is identified as an STAA (Surface Transportation Assistance Act) Terminal Access route for trucks. Signage is present on Riego Road between SR 99 and Pacific Avenue identifying it as suitable for travel by STAA trucks. Similarly, the segment of Baseline Road between Foothills Boulevard and Fiddymont Road is also considered an STAA service route. STAA routes allow for trucks with different dimensions than CA Legal trucks to utilize designated streets.<sup>2</sup>

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<sup>1</sup> Source: <https://safetydata.fra.dot.gov/OfficeofSafety/PublicSite/Crossing/Crossing.aspx>. Accessed on April 7, 2020.

<sup>2</sup> Source: <https://dot.ca.gov/-/media/dot-media/programs/traffic-operations/documents/truck-legend-a11y.pdf> Accessed on April 7, 2020.

## 3.0 PROJECT ALTERNATIVES

This section presents the descriptions of the project alternatives for the Riego Road-Baseline Road study corridor.

### NO BUILD ALTERNATIVE

Under this alternative, the Riego Road-Baseline Road study corridor would not be widened to four continuous lanes. However, portions of the corridor may be widened in conjunction with frontage improvements for adjacent specific plans. Due to the uncertainty of what precisely the No Build Alternative would consist of under Design Year conditions, it is not evaluated in Chapter 4.

Given the traffic growth that is discussed in Chapter 4, it is apparent that the lack of comprehensive capacity improvements to the corridor would result in severe congestion in some areas under Design Year conditions.

### BUILD ALTERNATIVE

The build alternative would widen the Riego Road-Baseline Road study corridor to four continuous lanes from SR 99 to Foothills Boulevard. New signalized intersections would also be constructed, as described in Chapter 4. Note that the build alternative is considered the interim project for the corridor; the ultimate project would widen the corridor to six lanes from State Route 99 to Fiddyment Road/Walerga Road.



## 4.0 DESIGN YEAR CONDITIONS

This section describes a preliminary assessment of design year (2040) operating conditions under the No Build and Build Alternatives. This discussion is not intended to be detailed or comprehensive. Instead, it utilizes readily available information to estimate the traffic operations conditions at a planning level of detail.

### LAND USE AND ROADWAY NETWORK ASSUMPTIONS

Arguably, the most recent and reliable travel forecasts for the majority of the study corridor were prepared as part of the *Sunset Area Plan and Placer Ranch Specific Plan Final Transportation Impact Study* (Fehr & Peers, 2018). Although cumulative forecasts were prepared for eight distinct scenarios, the scenario most applicable and chosen to represent design year conditions for this study is the following:

- Cumulative Plus Placer Ranch and Sunset Area Plan (20-year Scenario)

This scenario assumes reasonably foreseeable land developments and roadway improvements within the SACOG region over the next 20 years including 20 years of absorption (but not buildout) of the Placer Ranch and Sunset Area Plans. This scenario also assumes development of the Placer Vineyards and Sutter Pointe Specific Plans located along the study corridor.

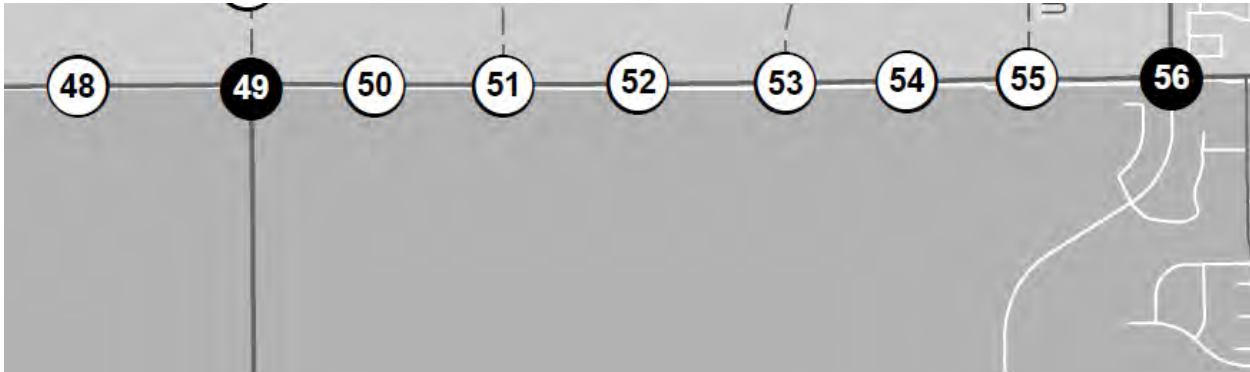
The following roadway improvements within and near the study corridor were assumed for this scenario:

- Baseline Road is widened to four lanes from the Sutter County line to Watt Avenue, six lanes from Watt Avenue to Fiddymment Road<sup>3</sup>, and four lanes from Fiddymment Road to Foothills Boulevard.
- Riego Road is widened to four lanes from SR 99 to the Placer County line.
- Placer Parkway is extended west from SR 65 to Santucci Boulevard (i.e., Watt Avenue extension) as four lanes.

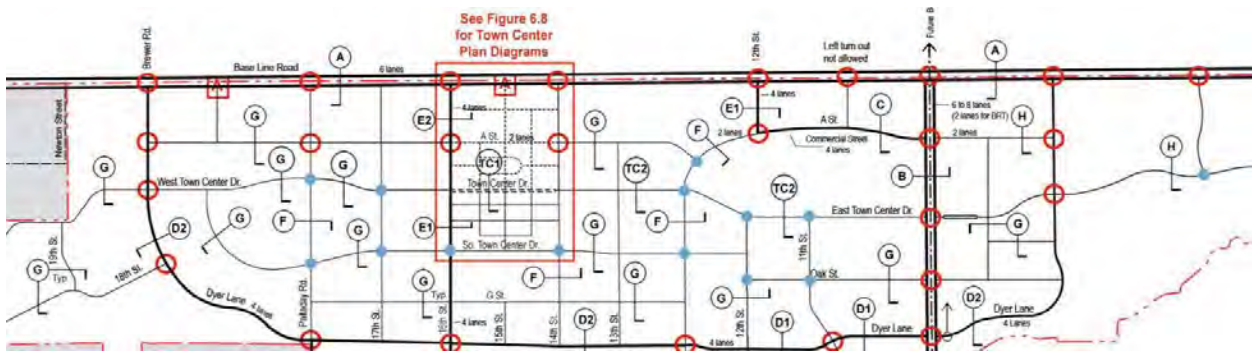
Design year forecasts for the portion of Riego Road in Sutter County were derived from ongoing studies being prepared by Fehr & Peers for proposed land developments in that area.

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<sup>3</sup> The widening of Baseline Road to six lanes from Watt Avenue to Fiddymment Road was assumed consistent with the City of Roseville General Plan Circulation Element and CIP. Development along the Sierra Vista Specific Plan frontage is setting aside right-of-way to enable this widening to occur.



Map showing seven additional planned signalized intersections (shown in white circles) on Baseline Road along the frontage of the Sierra Vista Specific Plan. Note that intersections 49 and 56 are at Watt Avenue and Fiddymment Road/Walerga Road, respectively.



Map showing eight new planned signalized intersections (shown in red circles) on Baseline Road along the frontage of the Placer Vineyards Specific Plan

Source: <https://www.placer.ca.gov/DocumentCenter/View/9777/Chapter-5---Transportation-and-Circulation-PDF>



Map showing four new planned signalized intersections (shown in green/yellow square) on Riego Road along the frontage of the Sutter Pointe Specific Plan

Source: <https://www.suttercounty.org/assets/pdf/cs/ps/measuram/Chapter6.pdf>

Excluding the two signalized ramp terminal intersections at SR 99/Riego Road, the total number of signalized intersections along the Riego Road-Baseline Road study corridor will increase from 5 today to an estimated 25 under design year conditions. This includes 7 in the Sierra Vista Specific Plan, 8 within the Placer Vineyards Specific Plan, 4 within the Sutter Pointe Specific Plan, 4 that are not within any particular specific plan boundary, and minus 3 that that would overlap between the Placer Vineyards and Sierra Vista Specific Plans.

## TRAFFIC FORECASTS

**Table 5** shows the design year ADT on the study corridor. When compared to the existing volumes in Table 2, substantial traffic growth is anticipated in the corridor due to planned developments described previously, as well as increases in background traffic flows. Between Locust Road and Watt Avenue, traffic volumes on Baseline Road would increase from 13,100 ADT today to 35,400 ADT under design year conditions, a 170 percent increase.

**Table 5: Roadway Segment Daily Volumes and Operations – Design Year Conditions**

Jurisdiction	Roadway Segment	Design Year Conditions <sup>1</sup>				
		LOS Standard	Lanes	Classification <sup>2</sup>	ADT	LOS / V/C Ratio <sup>2</sup>
Sutter County	Riego Road – SR 99 to Locust Road	D	4	4E	30,000	C / 0.60
Placer County	Baseline Road – Locust Road to Watt Ave / Santucci Boulevard	C / E <sup>3</sup>	4	4H	35,400	D / 0.87
	Baseline Road – Watt Avenue / Santucci Boulevard to Fiddymont Road / Walerga Road	- <sup>4</sup>	4	Arterial	34,600	- <sup>4</sup>
City of Roseville	Baseline Road – Fiddymont Road / Walerga Road to Woodcreek Oaks Boulevard	- <sup>4</sup>	4	Arterial	35,000	- <sup>4</sup>
	Baseline Road – Woodcreek Oaks Boulevard to Foothills Boulevard	- <sup>4</sup>	4	Arterial	35,100	- <sup>4</sup>

Notes:

<sup>1</sup> Refer to prior pages for traffic forecasting methodologies used to develop design year forecasts.

<sup>2</sup> Based on ADT, LOS thresholds for given roadway classification in Table 2.

<sup>3</sup> Portion of this corridor is within/adjacent to the Placer Vineyards Specific Plan that permits LOS E; west of that plan, LOS C is allowed.

<sup>4</sup> City of Roseville does not apply a daily LOS threshold to its roadways. Under design year conditions, development of the Sierra Vista Specific Plan on the north side of Baseline Road continuously from Fiddymont Road to Watt Avenue assumed to result in primary responsibility for operations to be with the City of Roseville.

ADT = average daily traffic; LOS = level of service;

Shaded cells indicate exceedance of General Plan LOS policy.

Source of traffic forecasts: Figure 22 of the *Sunset Area Plan and Placer Ranch Specific Plan Final Transportation Impact Study (Fehr & Peers, 2018)* for City of Roseville and Placer County facilities. For Sutter County facilities, source of forecasts is ongoing work being performed by Fehr & Peers for developments in that area.

## TRAFFIC OPERATIONS

**Table 6** shows design year traffic operations at the 12 study intersections.

**Table 6: Intersection Level of Service – Design Year Conditions**

#	Agency	Intersection	Traffic Control	LOS Standard	AM Peak Hour		PM Peak Hour	
					Delay	LOS	Delay	LOS
1	Caltrans	Riego Rd./SR 99 SB Ramps	Signal	D	10	A	8	A
2		Riego Rd./SR 99 NB Ramps	Signal	D	4	A	10	B
3	Sutter County	Riego Rd./Pacific Ave.	Signal	D	14	B	16	B
4		Riego Rd./Natomas Rd.	Signal	D	18	B	20	C
5		Riego Rd./Pleasant Grove Rd. (N)	Signal	D	9	A	10	A
6		Riego Rd./Pleasant Grove Rd. (S)	Signal	D	29	C	42	D
7	Placer County	Baseline Rd./Locust Rd.	Signal	C	11	B	14	B
8								
9	City of Roseville	Baseline Rd./Watt Ave.	Signal	C <sup>1</sup>	36	D	52	D
		Baseline Rd./Fiddymment Rd.	Signal	C <sup>1</sup>	57	E	66	E
		Baseline Rd./Woodcreek Oaks Blvd.	Signal	C <sup>1</sup>	108	F	133	F
		Baseline Rd./Junction Blvd.	Signal	C <sup>1</sup>	17	B	17	B
		Baseline Rd./Main St./Foothills Blvd.	Signal	C <sup>1</sup>	56	E	43	D

Notes:

<sup>1</sup> The City of Roseville 2020 General Plan contains the following policy:

*"Maintain a LOS "C" standard at a minimum of 70 percent of all signalized intersections and roadway segments in the City during the a.m. and p.m. peak hours. Exceptions to the LOS "C" standard may be considered where improvements required to achieve the standard would adversely affect pedestrian, bicycle, or transit access, and where feasible LOS improvements and travel demand-reducing strategies have been exhausted."*

Source of traffic analysis results: Table 53 of the *Sunset Area Plan and Placer Ranch Specific Plan Final Transportation Impact Study (Fehr & Peers, 2018)* for Placer County facilities. For City of Roseville facilities, results are based on 2020 General Plan transportation analysis for 2035 (Constrained) conditions. For Sutter County facilities, source of results is ongoing work performed by Fehr & Peers for developments in that area. Note that results above do not assume any mitigation for impacted facilities.

## 5.0 TRANSPORTATION ANALYSIS FOR THE PA-ED PHASE

As noted above, this TEPA has been developed using readily available information to inform transportation planning and design considerations. The next step will be to prepare a Transportation Analysis Report (TAR) for the PA-ED phase of the project. An overview of the technical approach for the TAR is provided below. Note that the need for an Opening Day scenario will need to be discussed among the project development team (PDT) members and different agencies.

### DESIGN YEAR TRAFFIC FORECASTS

It is recommended that an updated set of design year traffic forecasts be developed for the entire study corridor based on an agreed-upon set of land uses and roadway network improvements. The results presented in this report are based on at least two different travel demand models, which likely include some differing inputs and assumptions.

Separate design year forecasts should be developed for No Build and Build Alternative conditions because the added capacity to the corridor will induce more travel to it and/or shift trips away from parallel facilities. The travel demand model representing the Build Alternative should include highly detailed traffic analysis zone (TAZ) land use assignments for the three specific plans along the corridor, as well as proper coding of all arterial and collector streets that would influence travel in the corridor.

### DESIGN YEAR TRAFFIC OPERATIONS ANALYSIS

It is recommended that the entire corridor be studied using micro-simulation, such as SimTraffic or Vissim. Use of the deterministic Synchro model is not recommended for three reasons. First, this model does not consider upstream/downstream bottlenecks that can affect travel between intersections. Second, it does not capture the beneficial effects of coordinated signal timing. Third, it is known to not produce reasonable maximum or 95<sup>th</sup> percentile queue length estimates that are often used for design purposes. SimTraffic or Vissim models are able to accurately take these factors into consideration when generating results.

Additionally, an Intersection Control Evaluation (ICE) similar to what is required for state highway improvements should be considered where definitive plans have not been made for physical improvements. Depending on forecast volumes, a variety of potential configurations and traffic controls may be feasible. Lastly, evaluation of the corridor's crash history should be conducted to determine if certain design treatments should be considered to address an above-average crash location.

## DESIGN YEAR GEOMETRIC CONSIDERATIONS

The following lists several issues related to traffic operations and design that should be considered in more detail during the PA-ED phase:

- UPRR Grade-Separation of Riego Road – specifically related to the distance from adjacent intersections and any modifications needed to maintain a connection to Riego Road to them.
- Signal Interconnect – the study corridor will serve large volumes of through traffic, which can be best accommodated using signal coordination.
- Bus Rapid Transit – There have been discussions around the placement of Bus Rapid Transit (BRT) within portions of the study corridor. While BRT is not planned to run along the study corridor itself, it may traverse the corridor on one or more north-south arterial routes.
- Geometric Design Approaches – The study corridor passes through three different agencies who have differing improvement standards. Additionally, the total number of signalized intersections in the corridor is planned to increase from five to 25, which will require substantial traffic analysis to provide input for their proper design.
- Typical Cross-Sections – further evaluation is recommended for the various proposed cross-sections along the corridor including lane widths, bicycle facilities, and median type.

## TRANSPORTATION ANALYSIS REPORT

The Transportation Analysis Report will be prepared to summarize the results and findings from the analysis described above. The report shall be submitted to the PDT for review and approval.



## 6.0 SUMMARY

This TEPA has provided a general evaluation of the existing and projected operating conditions along the Riego Road-Baseline Road corridor between SR 99 in Sutter County and Foothills Boulevard in Roseville. This 12-mile segment carries considerable levels of traffic each day. The route is used by Placer County residents to access downtown Sacramento and Sacramento International Airport, among other destinations. Congestion occurs in the western / central part of the corridor, where four all-way stop-control intersections are present.

Planned land development along the corridor in Sutter County, Placer County, and Roseville will contribute to substantial increases in traffic under Design Year conditions. Between Locust Road and Watt Avenue, traffic volumes on Baseline Road are expected to increase from 13,100 ADT today to 35,400 ADT under design year conditions, a 170 percent increase.

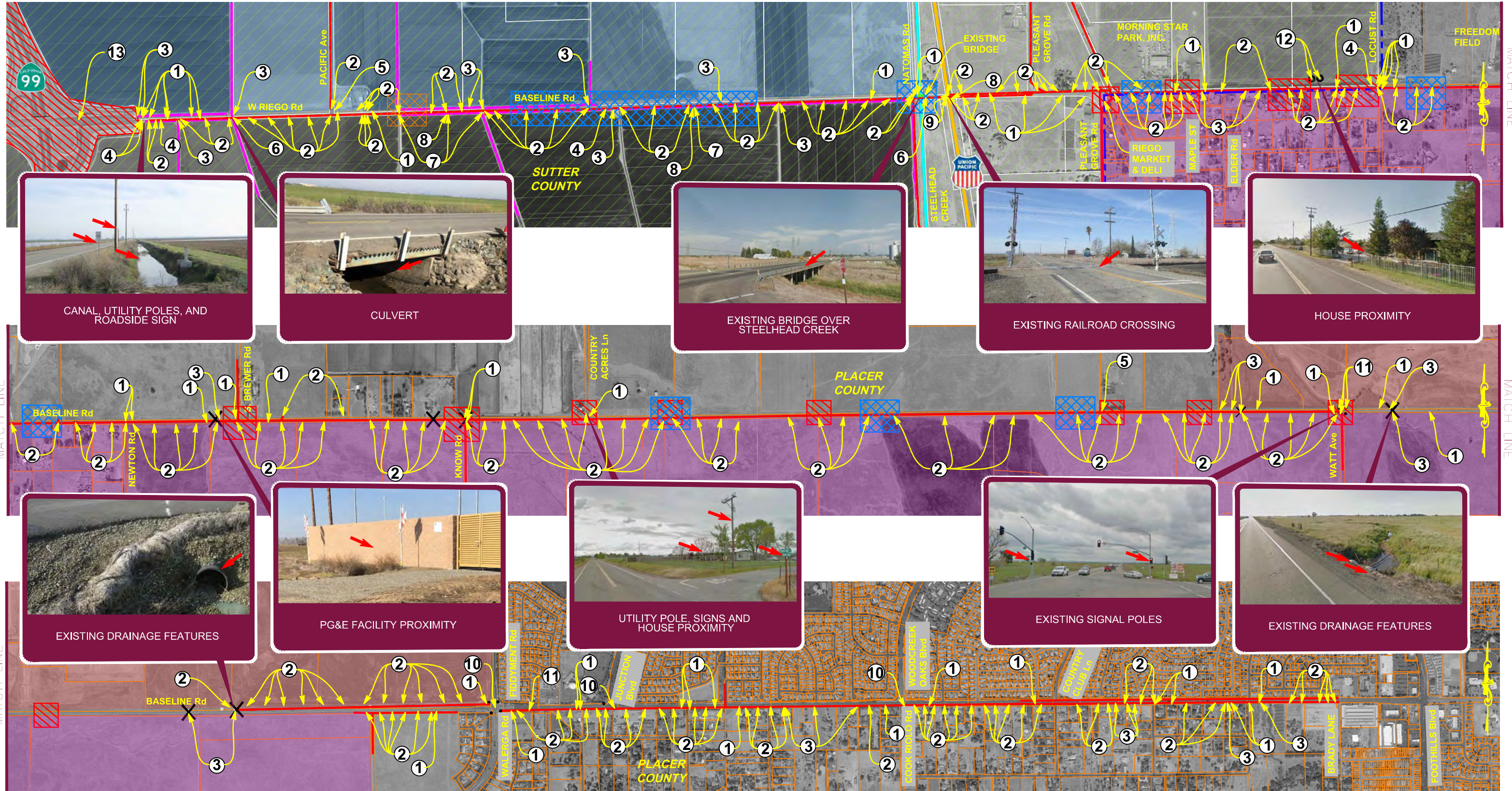
The Riego Road-Baseline Road study corridor is likely to experience some level of widening in conjunction with frontage improvements for adjacent specific plans regardless of whether a comprehensive plan is created for its widening. Based on the analysis results presented in this report, the lack of comprehensive capacity improvements on the corridor would result in severe congestion in some areas under Design Year conditions. In contrast, preliminary analysis of the Build Alternative suggests operations would be generally acceptable under Design Year conditions. More detailed analyses are required in the TAR to confirm this, and if necessary, determine what additional improvements may be needed to enhance operations.





ATTACHMENT B  
ALTERNATIVES





**LEGEND:**

- ① ROADWAY SIGNS
- ② JOINT POWER POLE
- ③ CULVERT
- ④ MANHOLE

- ⑤ INLET
- ⑥ GUARDRAIL
- ⑦ PUMP STATION
- ⑧ ELECTRICAL EQUIPMENT

- ⑨ RAILROAD GATES
- ⑩ SIGNAL
- ⑪ OVERHEAD SIGN
- ⑫ UTILITY TOWER

- ⑬ PORTIONS OF THE INTERCHANGE/POTENTIAL CULTURAL SITE
- COUNTY LIMITS

- CANAL
- STEELHEAD CREEK
- RAILROAD
- OVERHEAD ELECTRICAL LINE

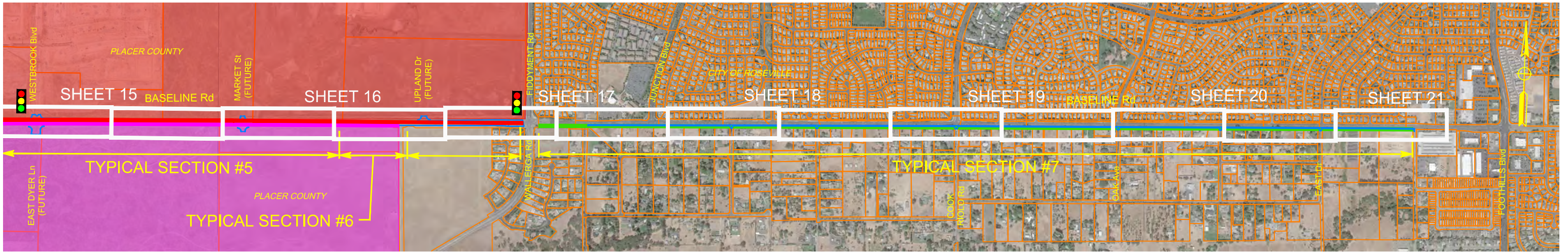
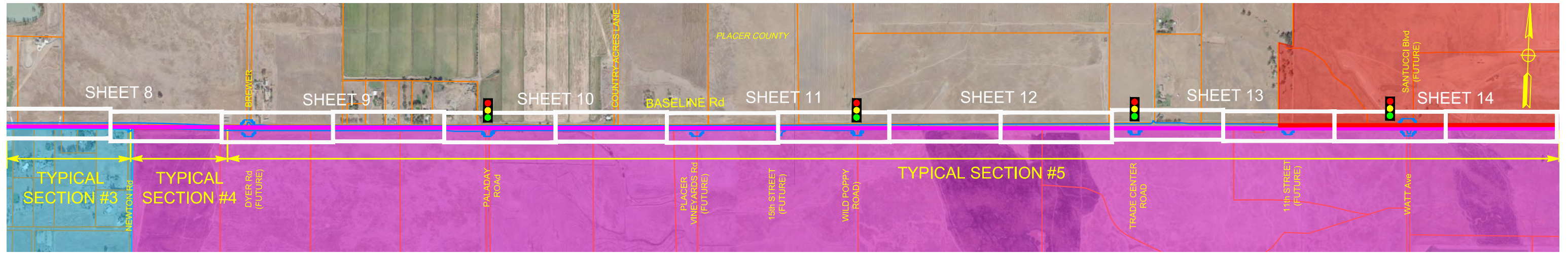
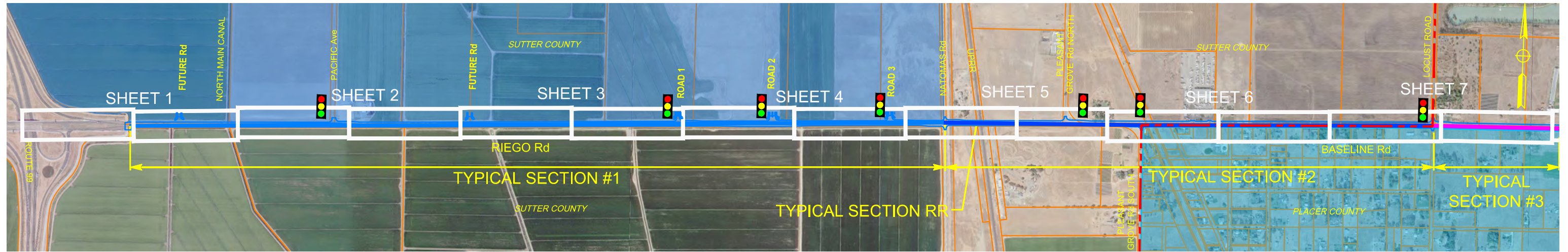
- ▨ IMPORTANT FARMLAND
- ▨ FAIRY SHRIMP
- ▨ GIANT GARTERSNAKE
- ▨ CULTURAL SITE

- ✕ IMPORTANT FARMLAND CROSSING
- ▨ SUTTER POINTE DEVELOPMENT
- ▨ PLACER VINEYARDS DEVELOPMENT
- ▨ SIERRA VISTA DEVELOPMENT



# ALTERNATIVE 1

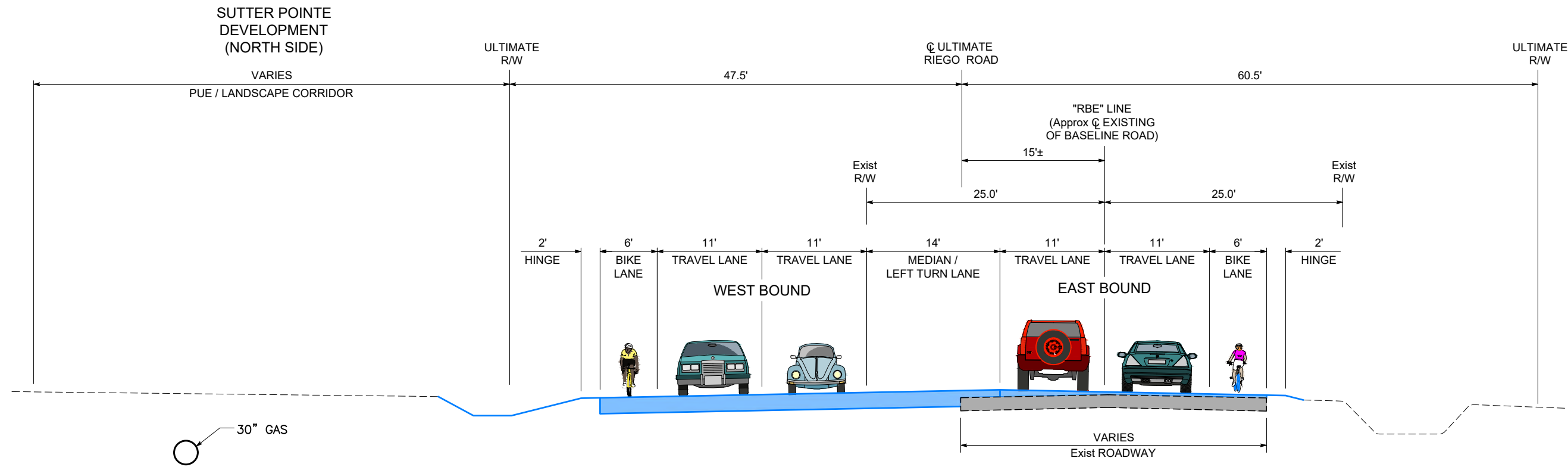




**LEGEND:**

- |   |  |   |   |
|---|--|---|---|
|  | SUTTER POINTE DEVELOPMENT                |  | PROPOSED RIEGO ROAD WIDENING (SUTTER POINTE)          |
|  | PLACER VINEYARDS (SPECIAL PLANNING AREA) |  | PROPOSED RIEGO ROAD / BASELINE ROAD WIDENING (COUNTY) |
|  | PLACER VINEYARDS DEVELOPMENT             |  | PROPOSED BASELINE ROAD WIDENING (PLACE VINEYARDS)     |
|  | SIERRA VISTA DEVELOPMENT                 |  | PROPOSED BASELINE ROAD WIDENING (SIERRA VISTA)        |
|  | COUNTY LINE                              |  | PROPOSED BASELINE ROAD WIDENING (ROSEVILLE)           |

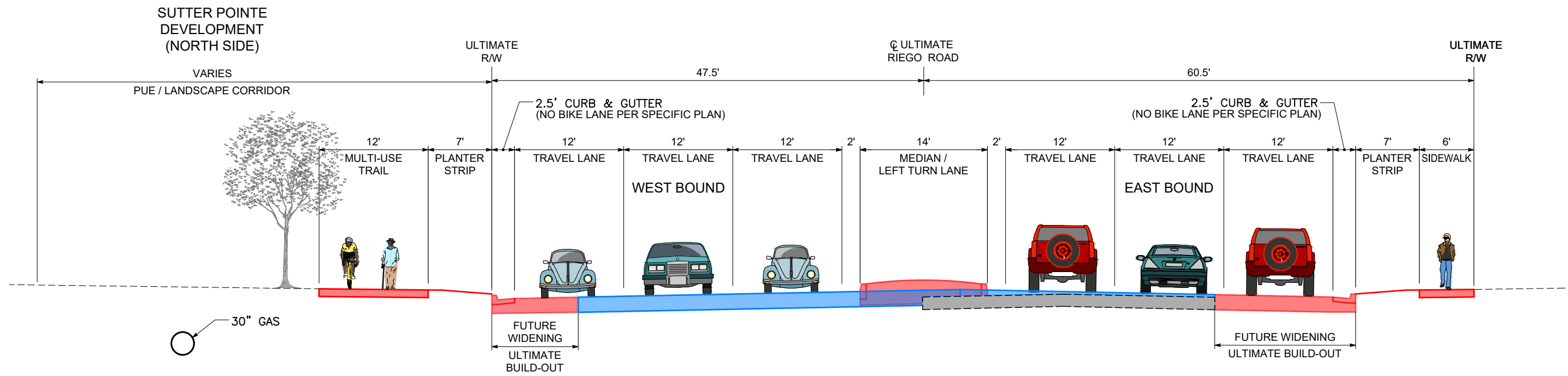




**RIEGO ROAD - TYPICAL SECTION (INTERIM)**  
**FROM ROUTE 99 TO NATOMAS ROAD**

LAYOUT SHEETS 1 TO 5  
 NO SCALE

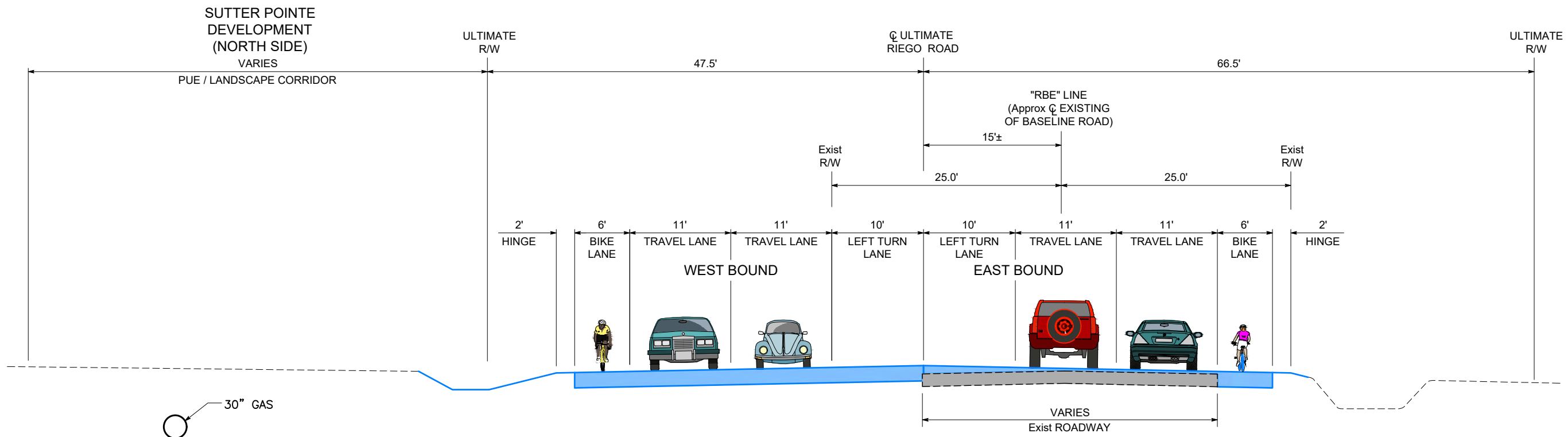
NOTE:  
 30" GAS LINE WITHIN 50' PG&E EASEMENT



**RIEGO ROAD - TYPICAL SECTION (ULTIMATE)**  
**FROM ROUTE 99 TO NATOMAS ROAD**

NO SCALE

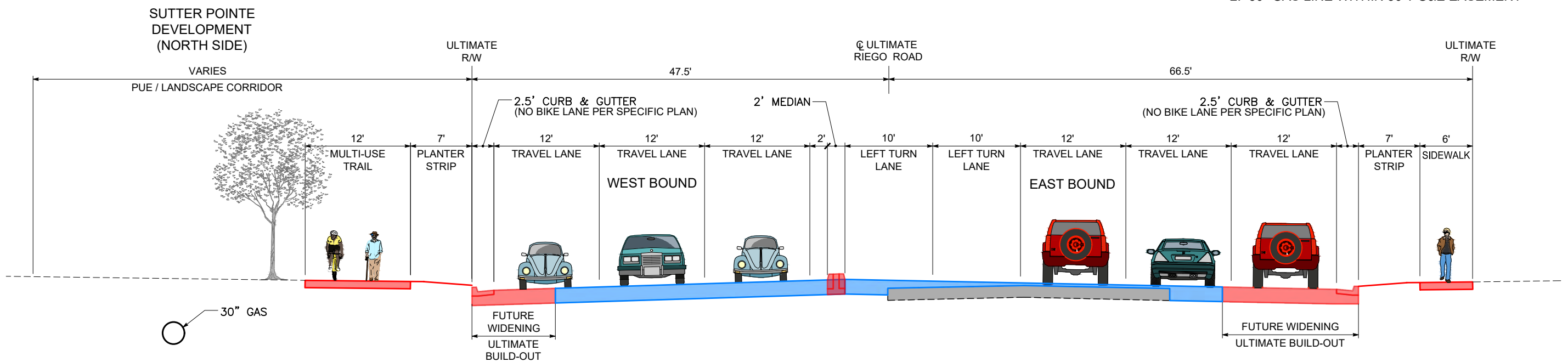
**TYPICAL SECTION #1**  
**ALTERNATIVE 1**



**RIEGO ROAD - TYPICAL SECTION (INTERIM)**  
**NORTHBOUND RIEGO ROAD AT INTERSECTION WITH DUAL LEFT TURN LANES**

LAYOUT SHEET 4  
 NO SCALE

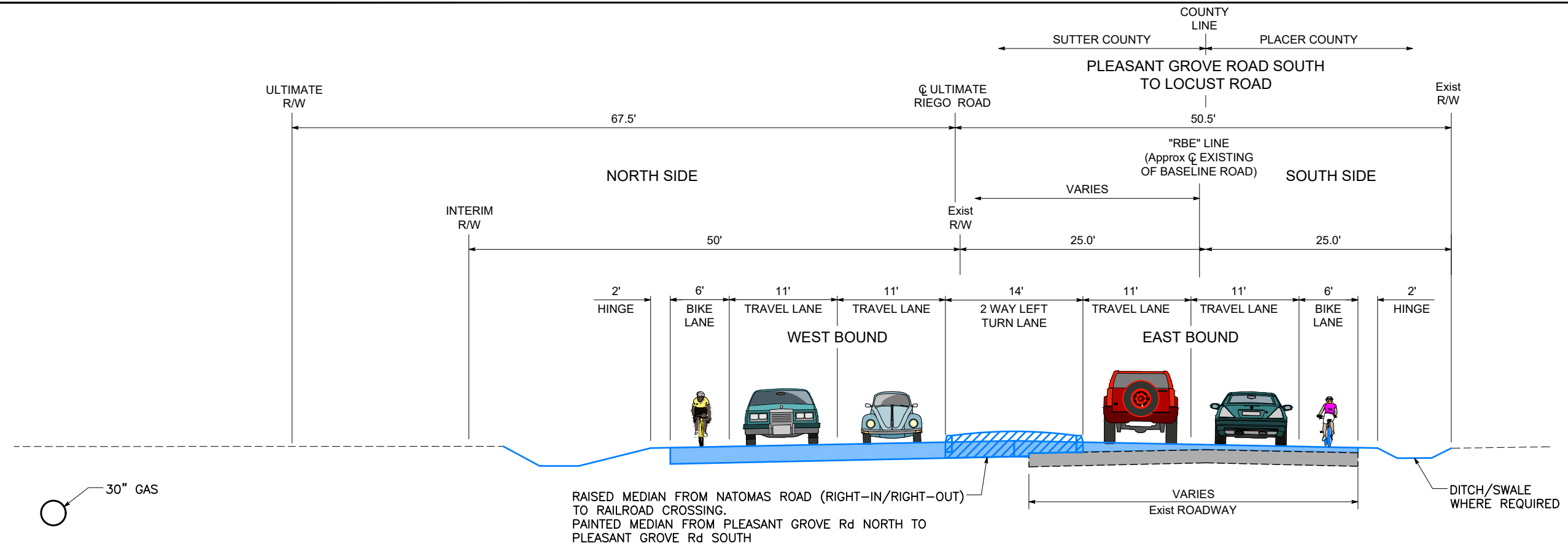
- NOTES:
1. 2-WAY LEFT TURN LANE ACCOMODATES LEFT TURN LANES WHERE NEEDED
  2. 30" GAS LINE WITHIN 50' PG&E EASEMENT



**RIEGO ROAD - TYPICAL SECTION (ULTIMATE)**  
**NORTHBOUND RIEGO ROAD AT INTERSECTION WITH DUAL LEFT TURN LANES**

NO SCALE

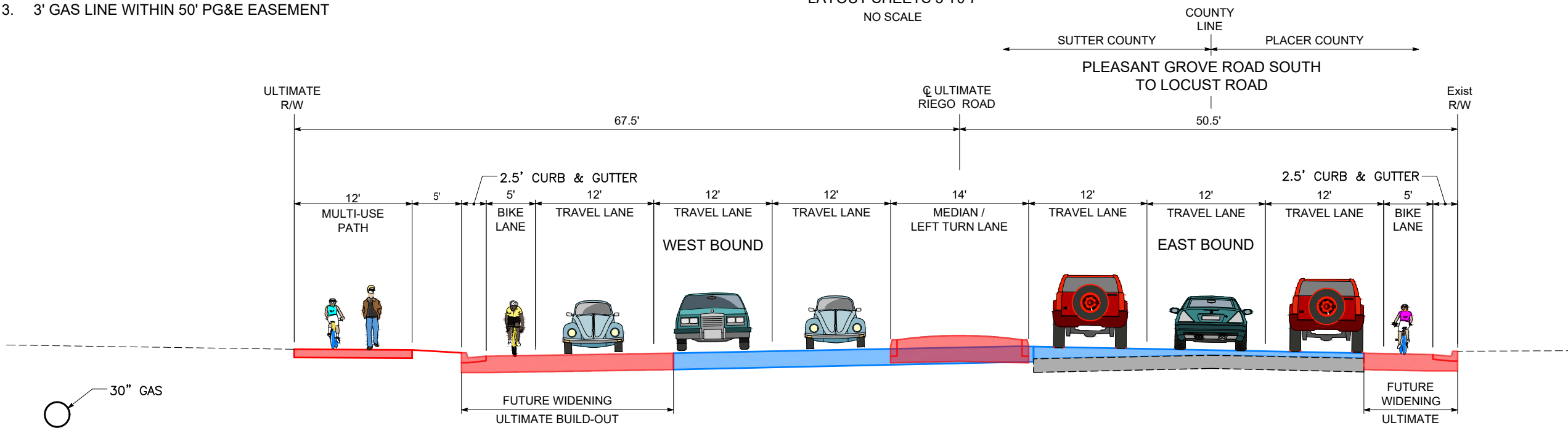
**TYPICAL SECTION #1A**  
**ALTERNATIVE 1**



- NOTES:
1. RAILROAD CROSSING NOT SHOWN
  2. 2-WAY LEFT TURN LANE ACCOMODATES LEFT TURN LANES WHERE NEEDED.
  3. 3' GAS LINE WITHIN 50' PG&E EASEMENT

**RIEGO ROAD - TYPICAL SECTION (INTERIM)**  
**NATOMAS ROAD TO LOCUST ROAD**

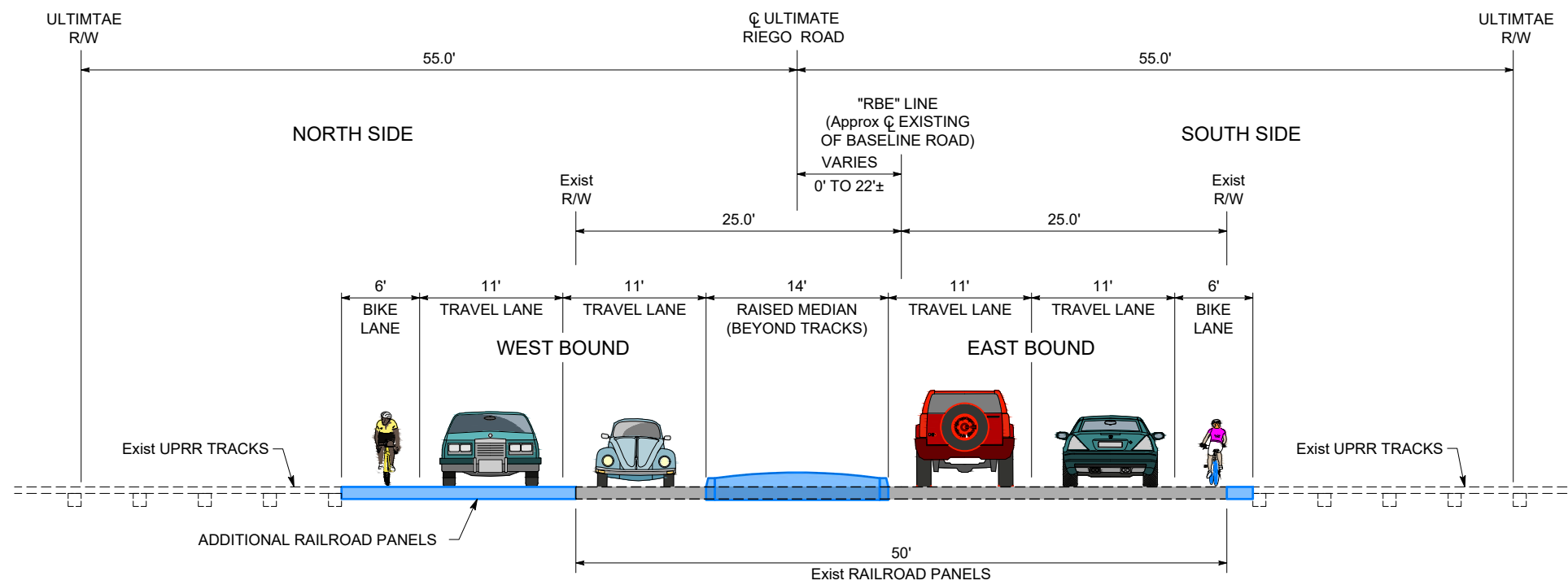
LAYOUT SHEETS 5 TO 7  
 NO SCALE



**RIEGO ROAD - TYPICAL SECTION (ULTIMATE)**  
**NATOMAS ROAD TO LOCUST ROAD**

NO SCALE

**TYPICAL SECTION #2**  
**ALTERNATIVE 1**



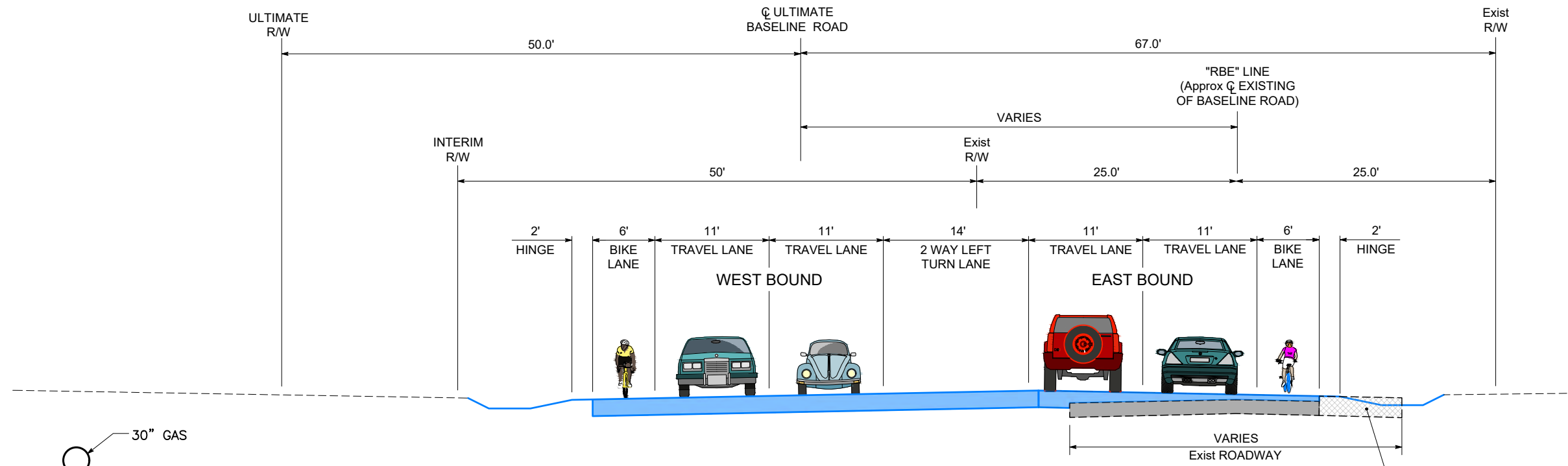
**RIEGO ROAD - TYPICAL SECTION (INTERIM)**  
**UNION PACIFIC RAILROAD AT GRADE CROSSING**  
 LAYOUT SHEET 5  
 NO SCALE

**RIEGO ROAD - TYPICAL SECTION (ULTIMATE )**  
**UNION PACIFIC RAILROAD GRADE SEPARATION - TO BE DETERMINED**

TYPICAL SECTION RR  
 ALTERNATIVE 1

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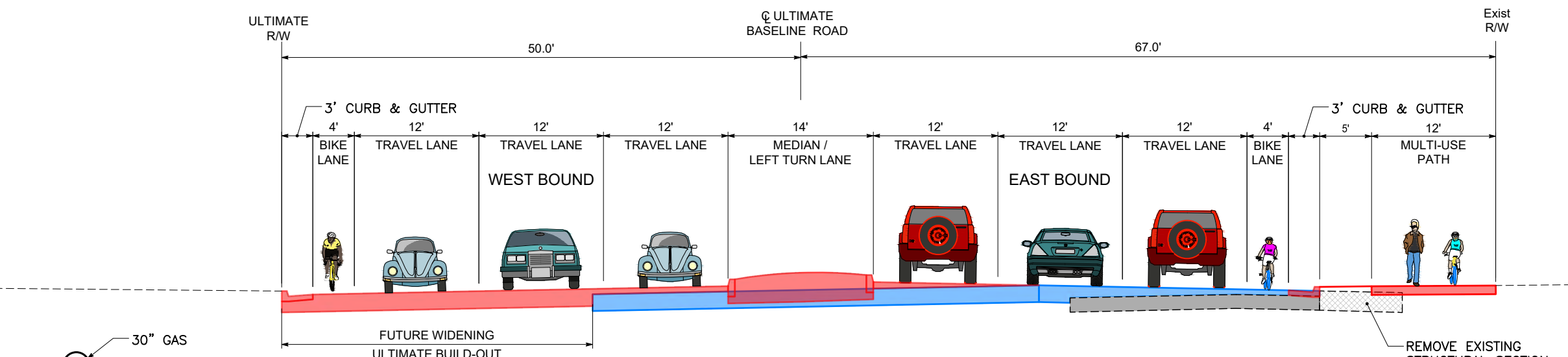




**RIEGO ROAD - TYPICAL SECTION (INTERIM)**  
**LOCUST ROAD TO NEWTON ROAD**

LAYOUT SHEETS 7 TO 8  
 NO SCALE

- NOTES:
1. 2-WAY LEFT TURN LANE ACCOMODATES LEFT TURN LANES WHERE NEEDED
  2. 30" GAS LINE WITHIN 50' PG&E EASEMENT

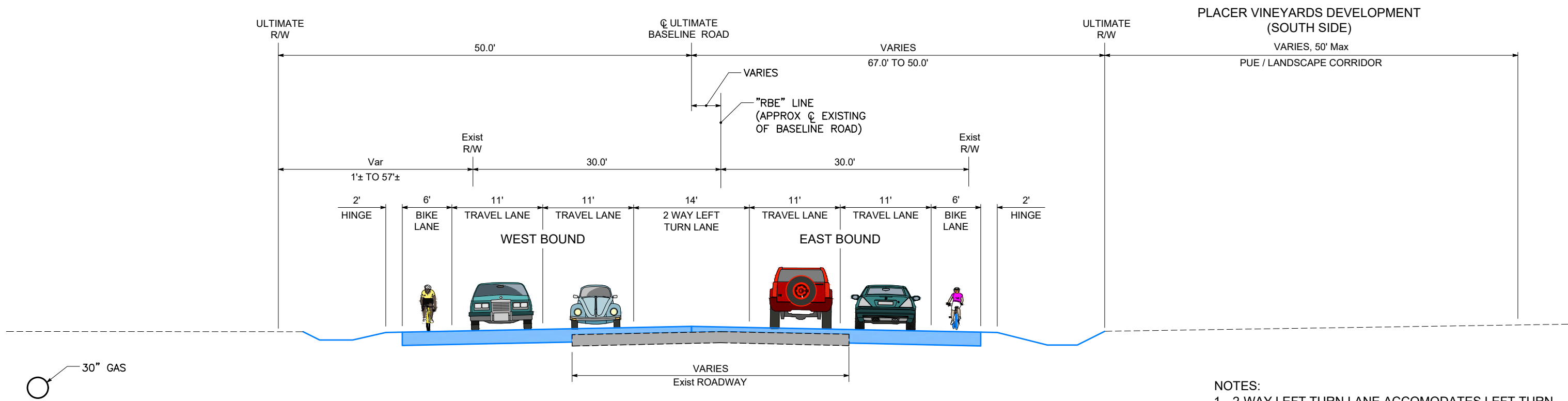


**RIEGO ROAD - TYPICAL SECTION (ULTIMATE)**  
**LOCUST ROAD TO NEWTON ROAD**

NO SCALE

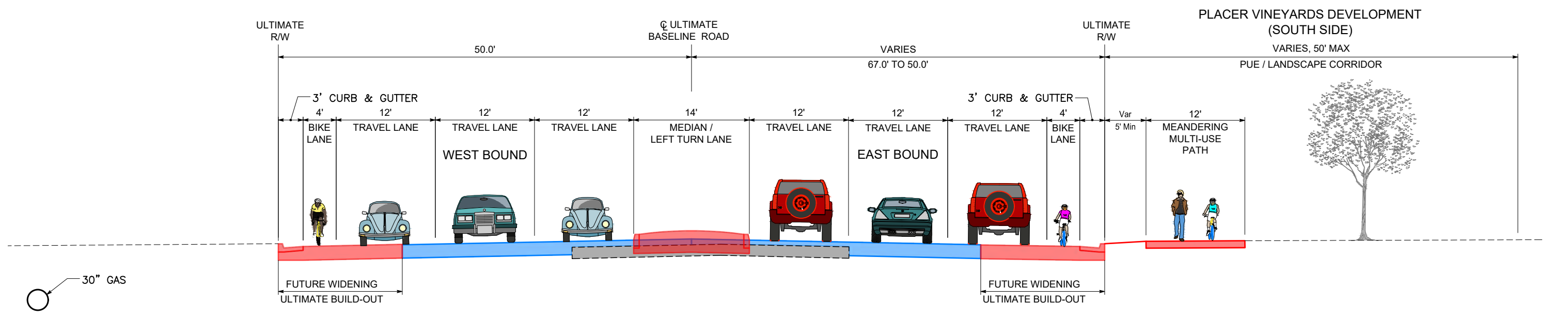
**TYPICAL SECTION #3**  
**ALTERNATIVE 1**

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**BASELINE ROAD - TYPICAL SECTION (INTERIM) TRANSITION**  
**NEWTON ROAD TO BREWER ROAD**  
 LAYOUT SHEETS 8 TO 9  
 NO SCALE

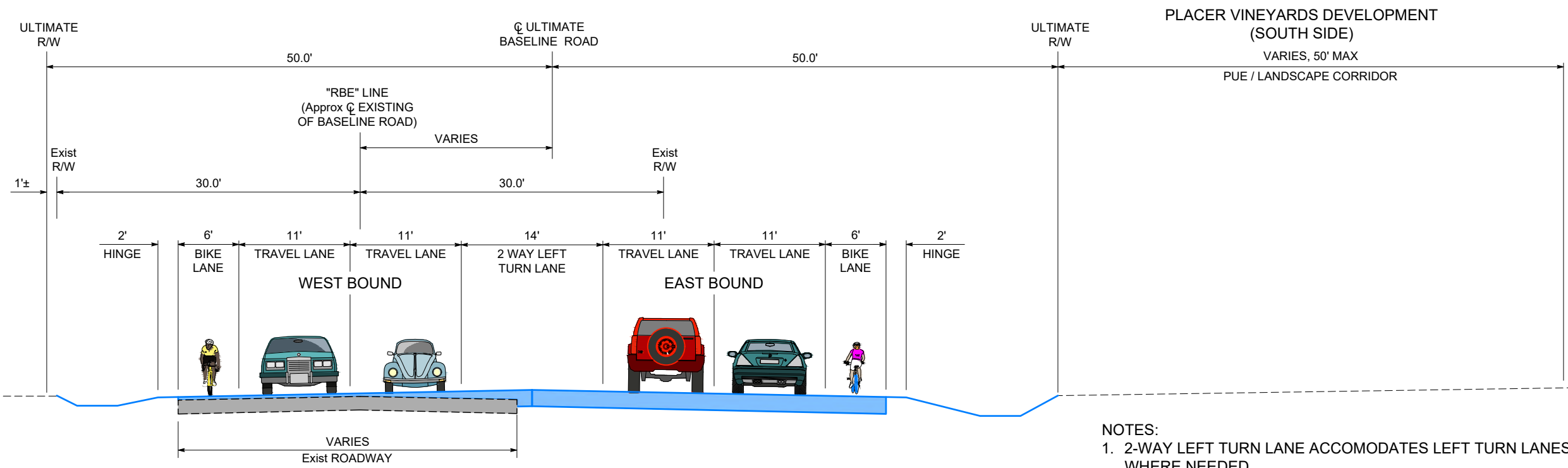
- NOTES:**
1. 2-WAY LEFT TURN LANE ACCOMODATES LEFT TURN LANES WHERE NEEDED
  2. 30" GAS LINE WITHIN 50' PG&E EASEMENT



**BASELINE ROAD - TYPICAL SECTION (ULTIMATE)**  
**NEWTON ROAD TO BREWER ROAD**  
 NO SCALE

**TYPICAL SECTION #4**  
**ALTERNATIVE 1**

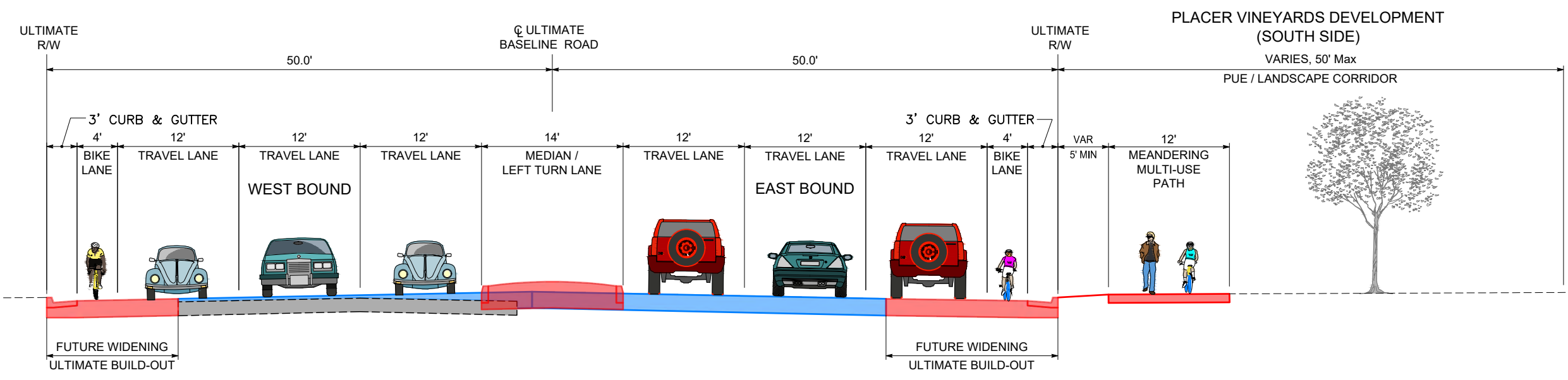
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**BASELINE ROAD - TYPICAL SECTION (INTERIM)**  
**BREWER ROAD TO SIERRAVISTA (WEST BOUNDARY)**

LAYOUT SHEETS 9 TO 13  
 NO SCALE

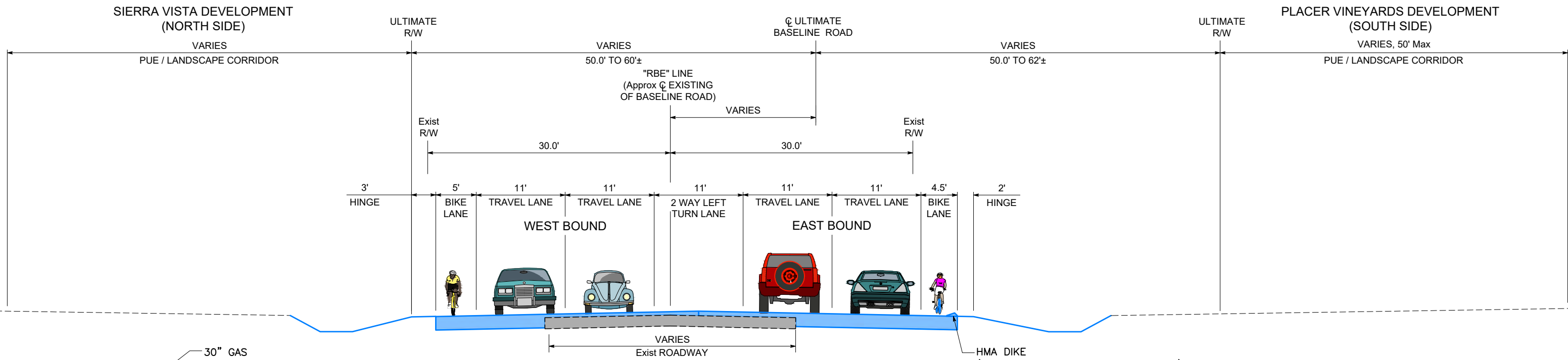
- NOTES:
1. 2-WAY LEFT TURN LANE ACCOMODATES LEFT TURN LANES WHERE NEEDED
  2. 30" GAS LINE SHOWN FROM COUNTRY ACRES LANE TO SIERRA VISTA BOUNDARY ONLY
  3. 30" GAS LINE WITHIN 50' PG&E EASEMENT
  4. 2-WAY LEFT TURN LANE, BIKE LANES AND WESTBOUND HINGE TRANSITION BEGINS WEST OF SIERRA VISTA BOUNDARY.



**BASELINE ROAD - TYPICAL SECTION (ULTIMATE)**  
**BREWER ROAD TO SIERRAVISTA (WEST BOUNDARY)**

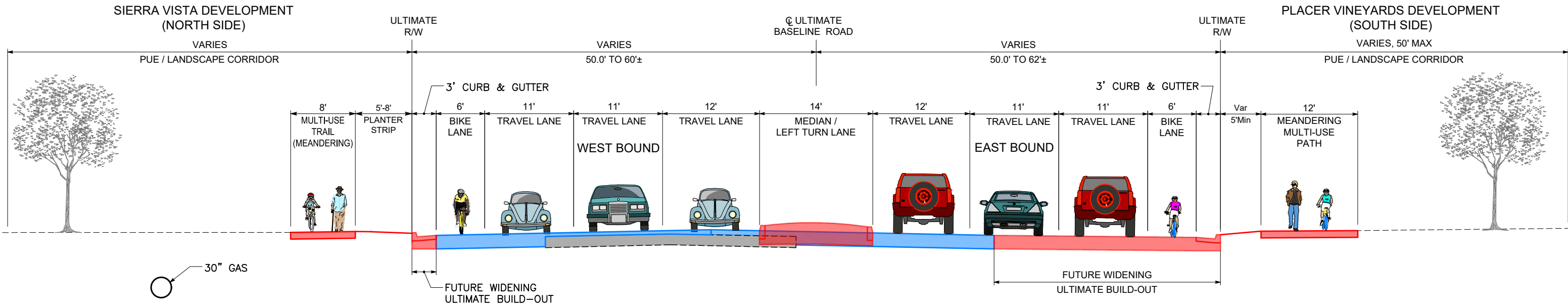
NO SCALE

**TYPICAL SECTION #5**  
**ALTERNATIVE 1**



**BASELINE ROAD - TYPICAL SECTION (INTERIM)**  
 SIERRAVISTA (WEST BOUNDARY) TO FIDDYMENT ROAD / WALERGA ROAD  
 LAYOUT SHEETS 13 TO 17  
 NO SCALE

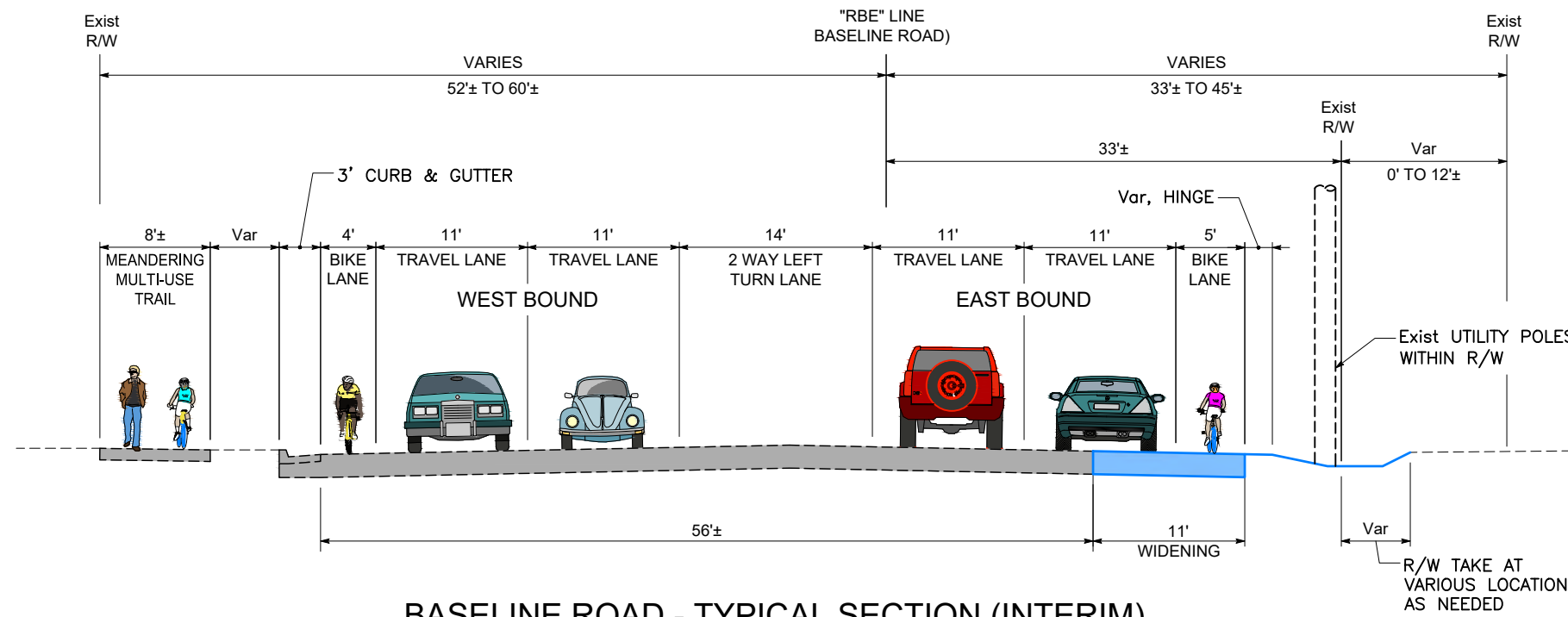
- NOTES:
1. 2-WAY LEFT TURN LANE ACCOMODATES LEFT TURN LANES WHERE NEEDED
  2. 30" GAS LINE WITHIN 50' PG&E EASEMENT



**BASELINE ROAD - TYPICAL SECTION (ULTIMATE)**  
 SIERRAVISTA (WEST BOUNDARY) TO FIDDYMENT ROAD / WALERGA ROAD  
 NO SCALE

**TYPICAL SECTION #6**  
**ALTERNATIVE 1**

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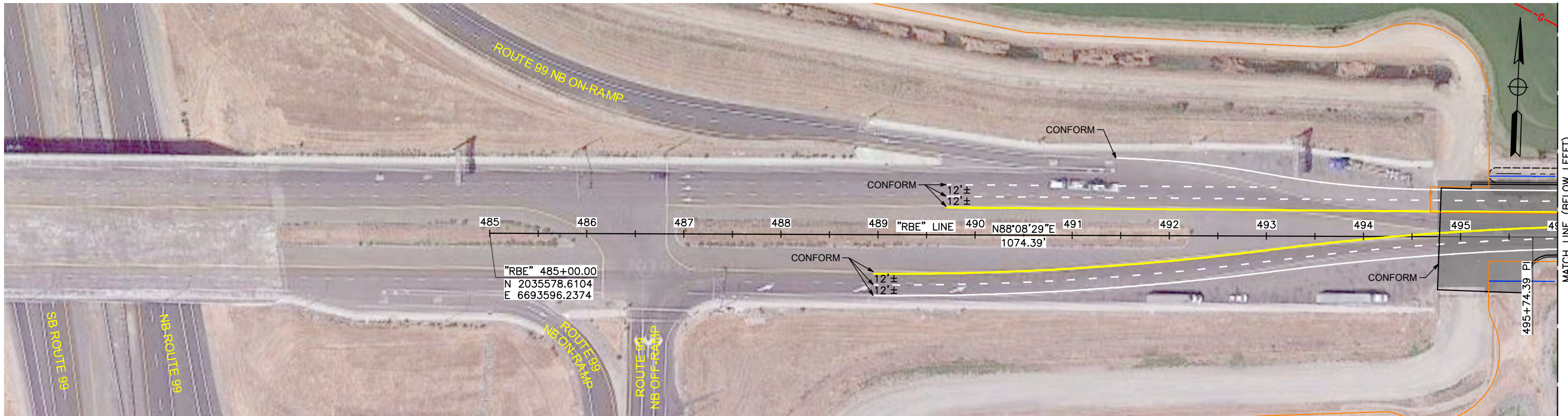


**BASELINE ROAD - TYPICAL SECTION (INTERIM)**  
**FIDDYMENT ROAD / WALERGA ROAD TO BRADY LANE**

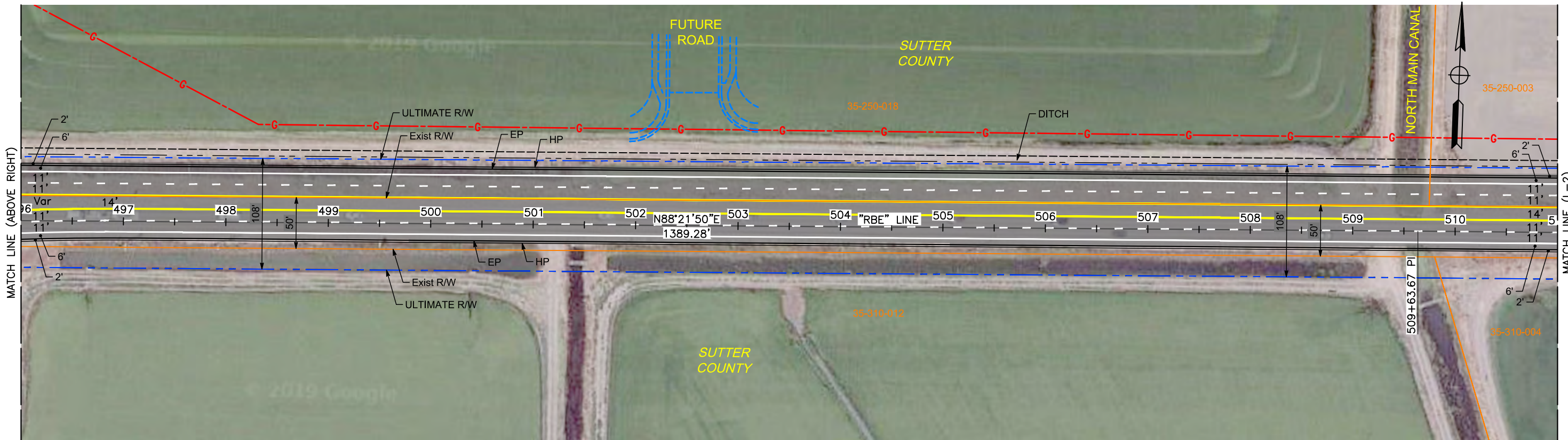
LAYOUT SHEETS 17 TO 21  
 NO SCALE

**TYPICAL SECTION #7**  
**ALTERNATIVE 1**





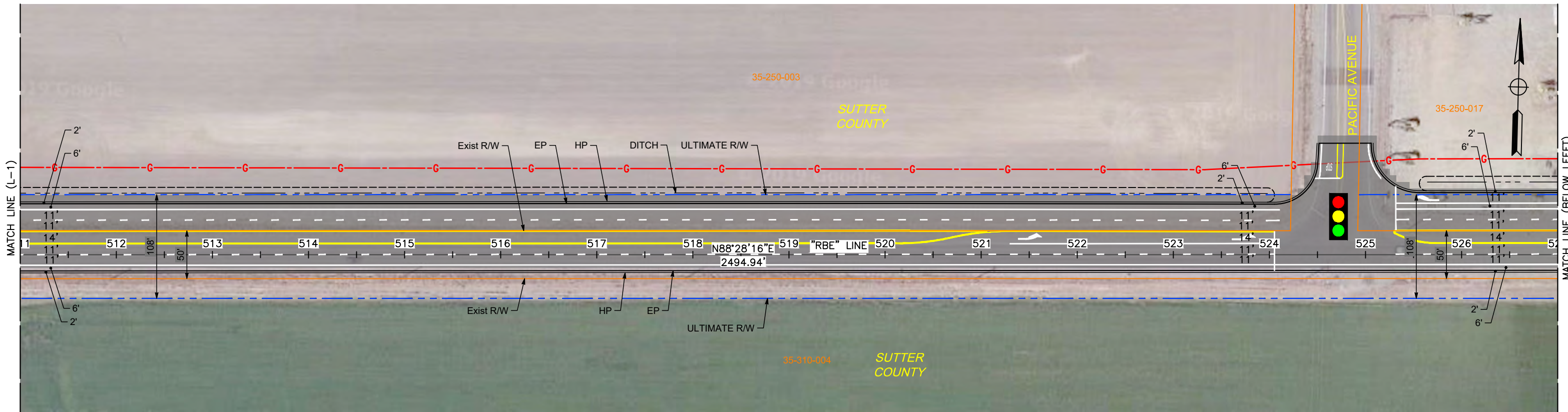
RIEGO ROAD



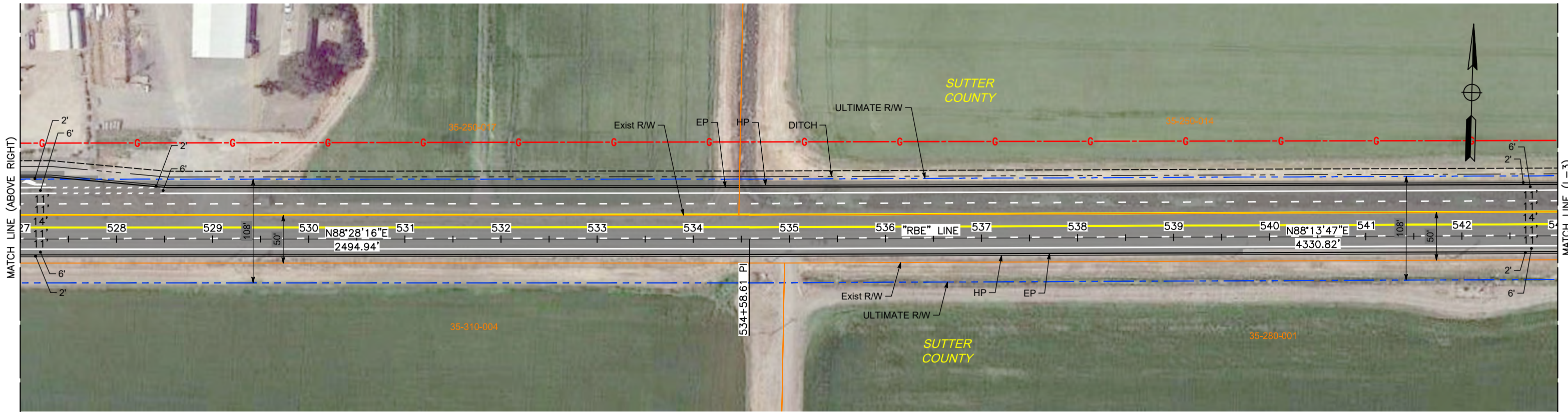
RIEGO ROAD

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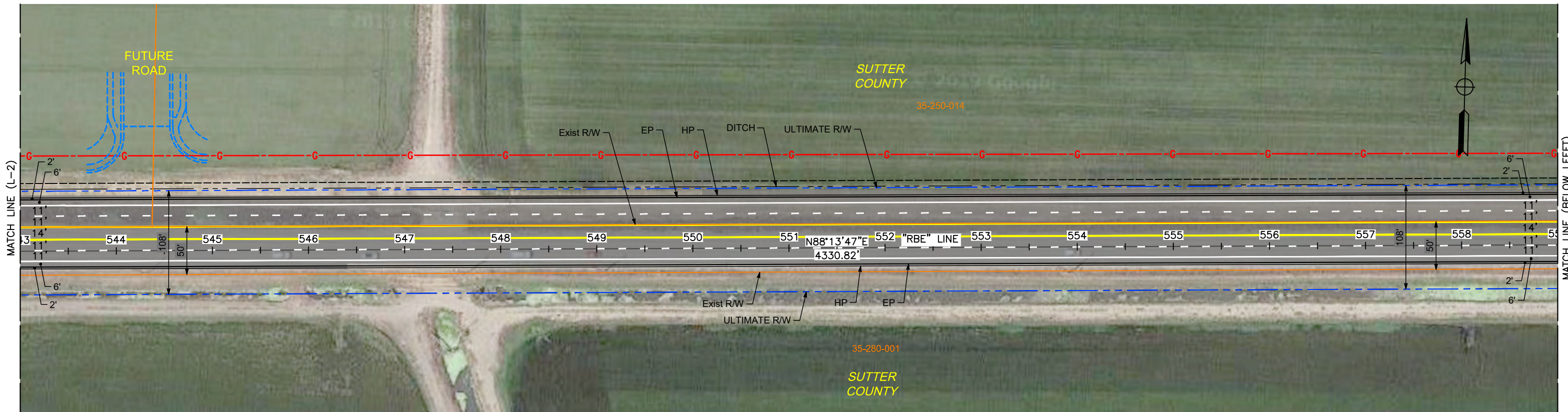


RIEGO ROAD

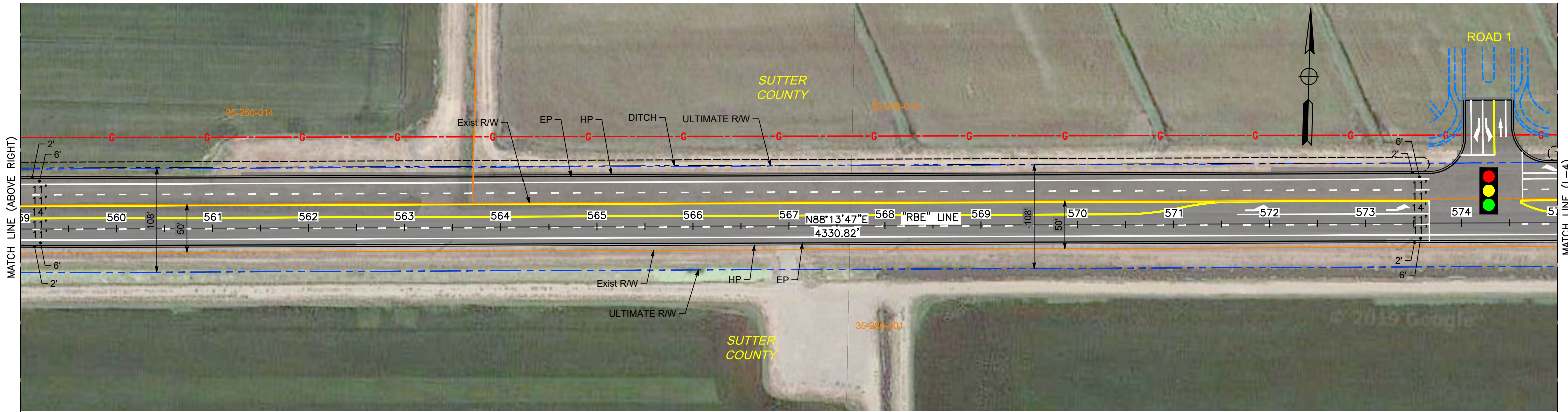


RIEGO ROAD



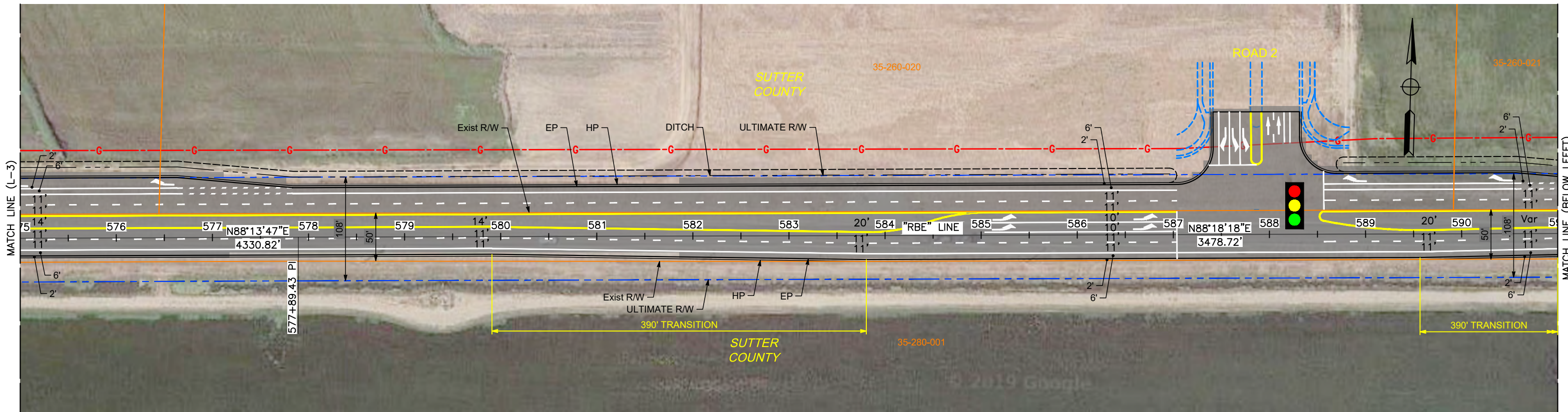


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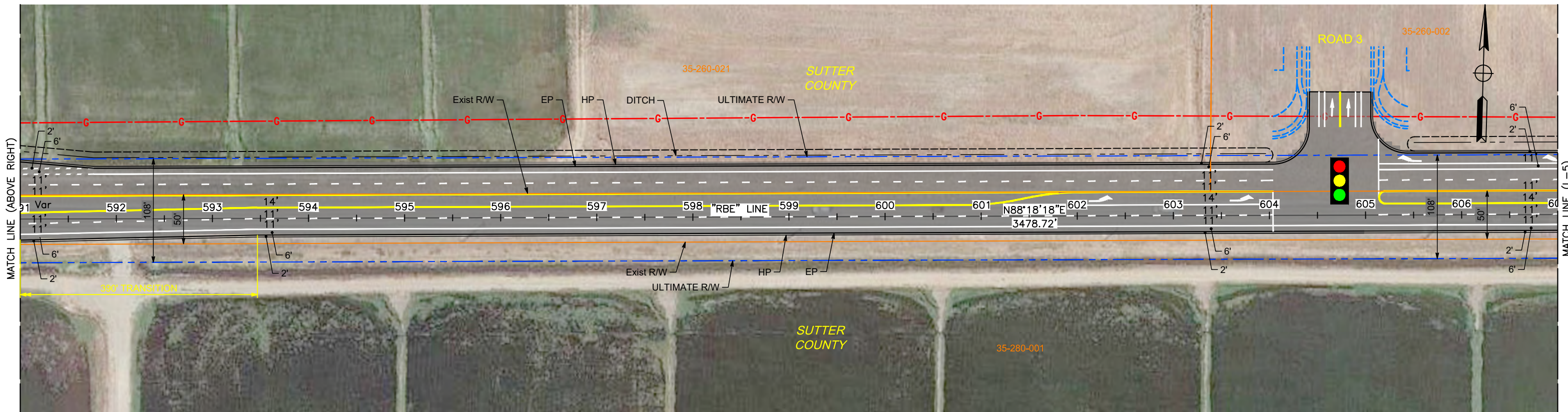


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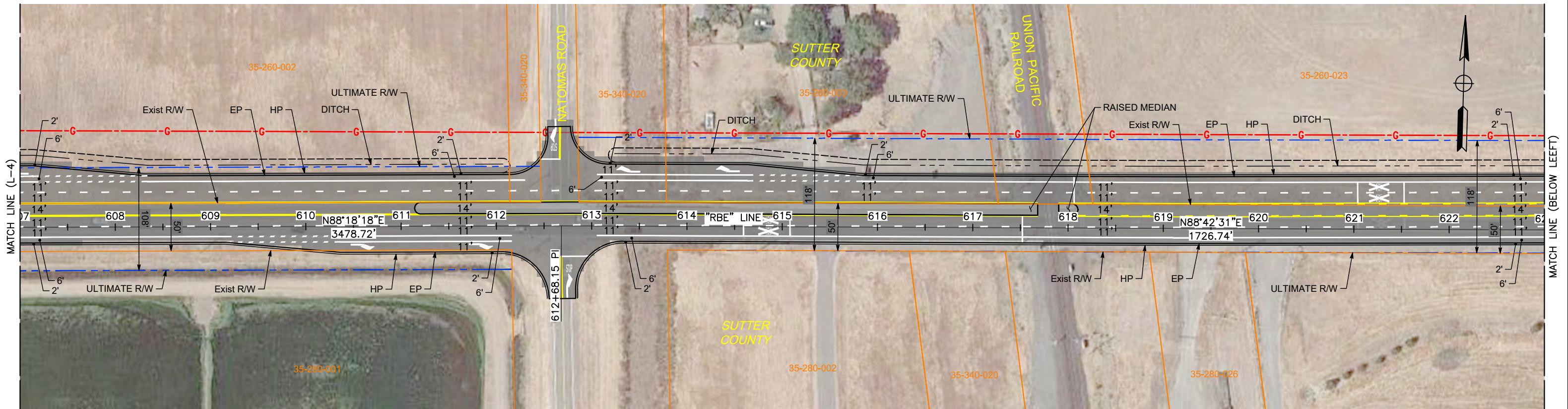


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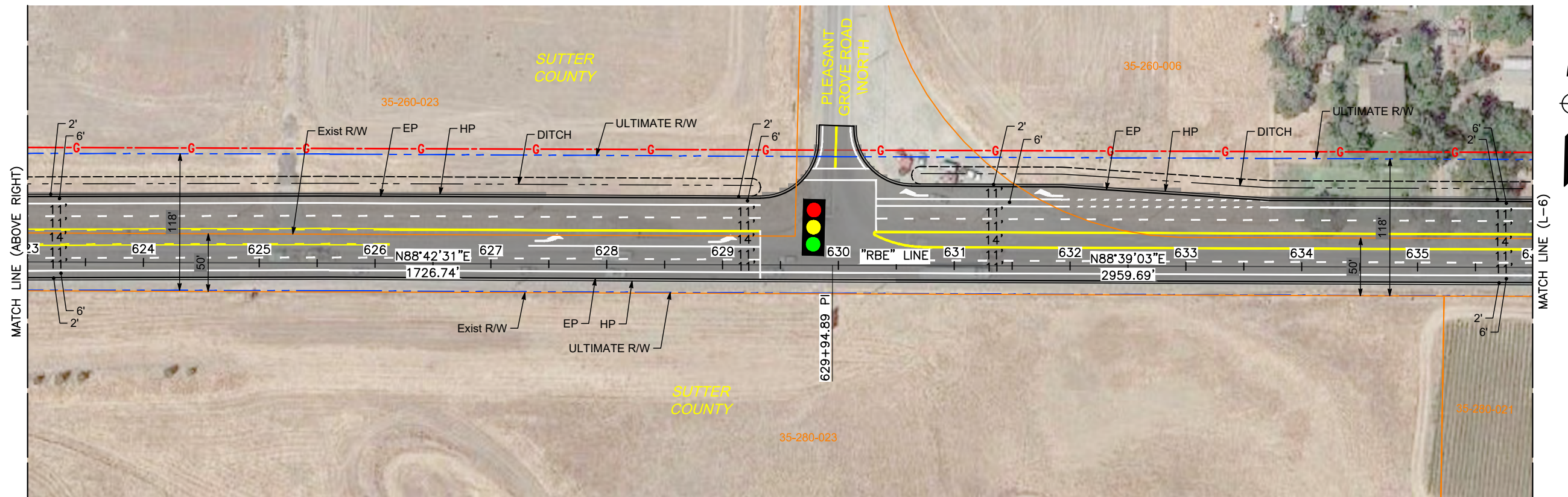


RIEGO ROAD





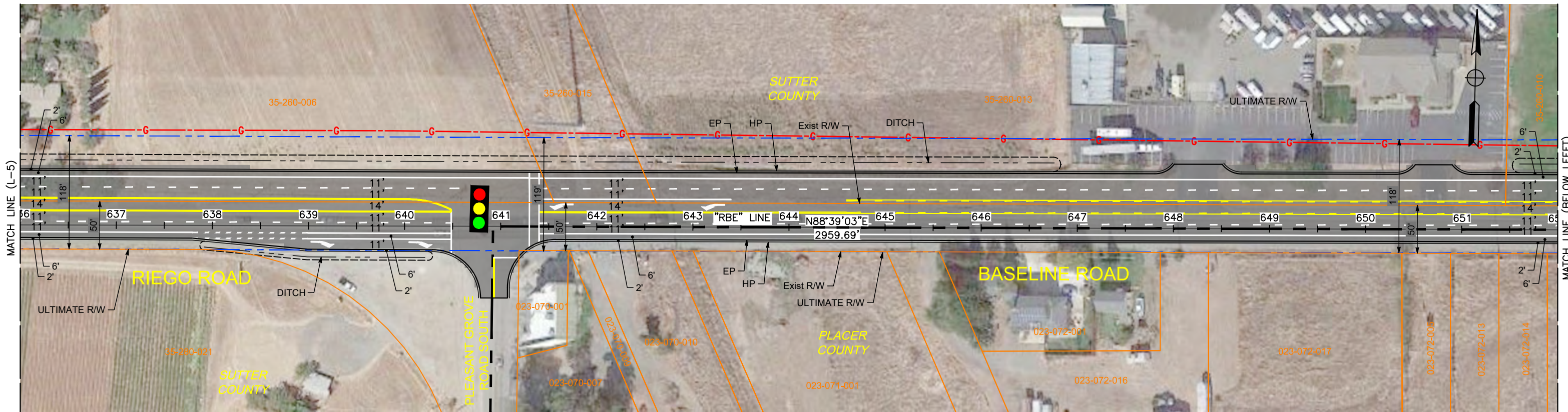
RIEGO ROAD



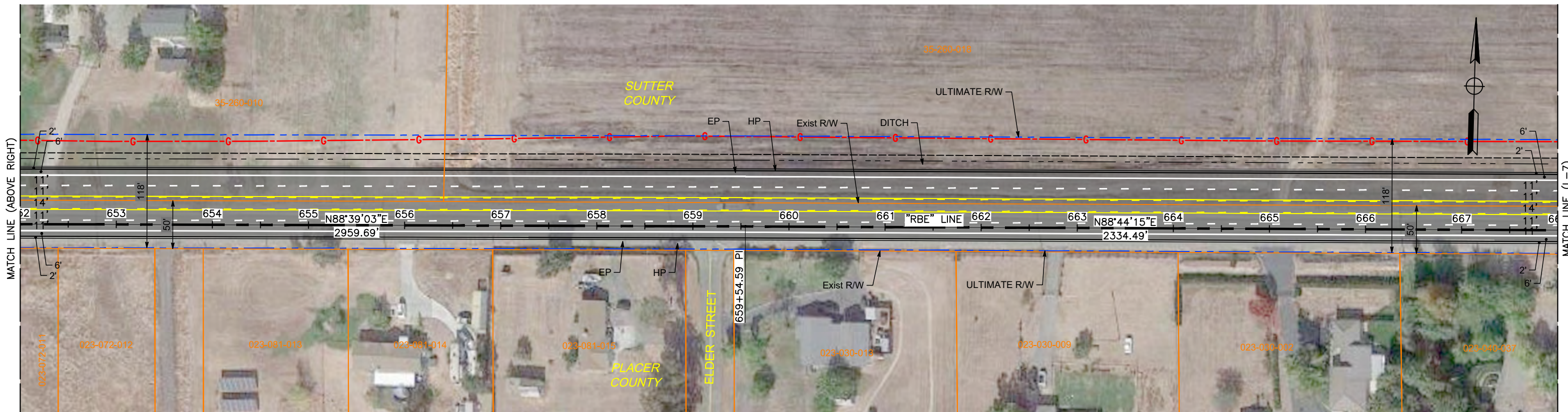
RIEGO ROAD

RIGHT OF WAY TAKE



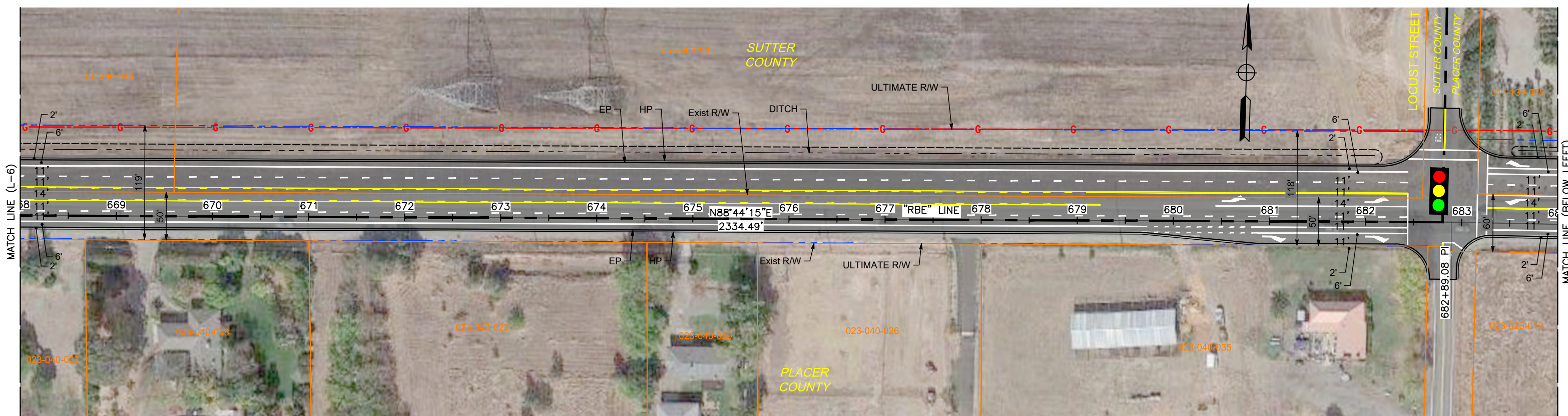


RIEGO ROAD / BASELINE ROAD

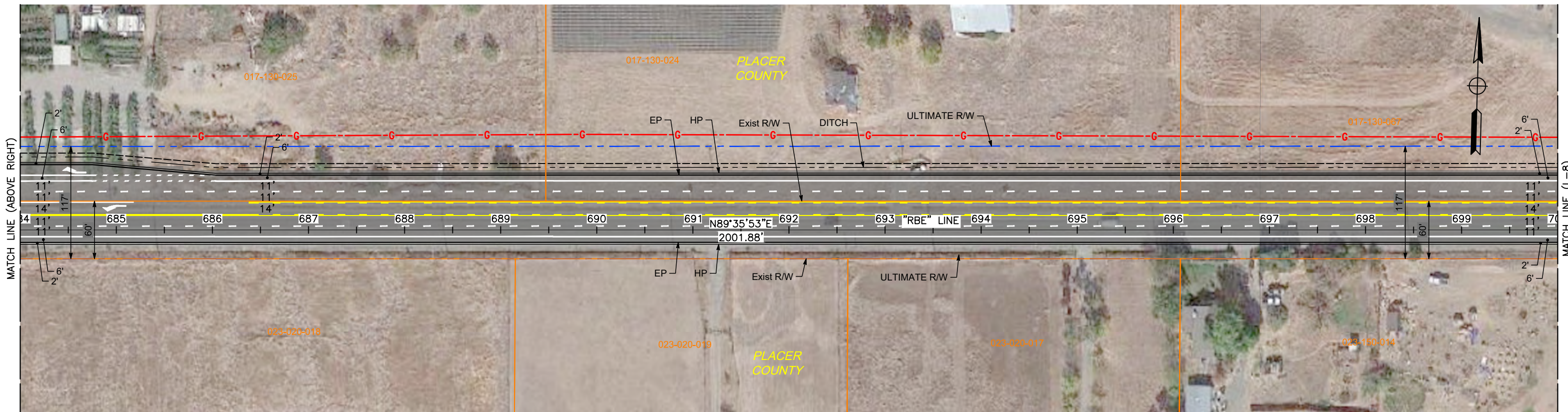


BASELINE ROAD





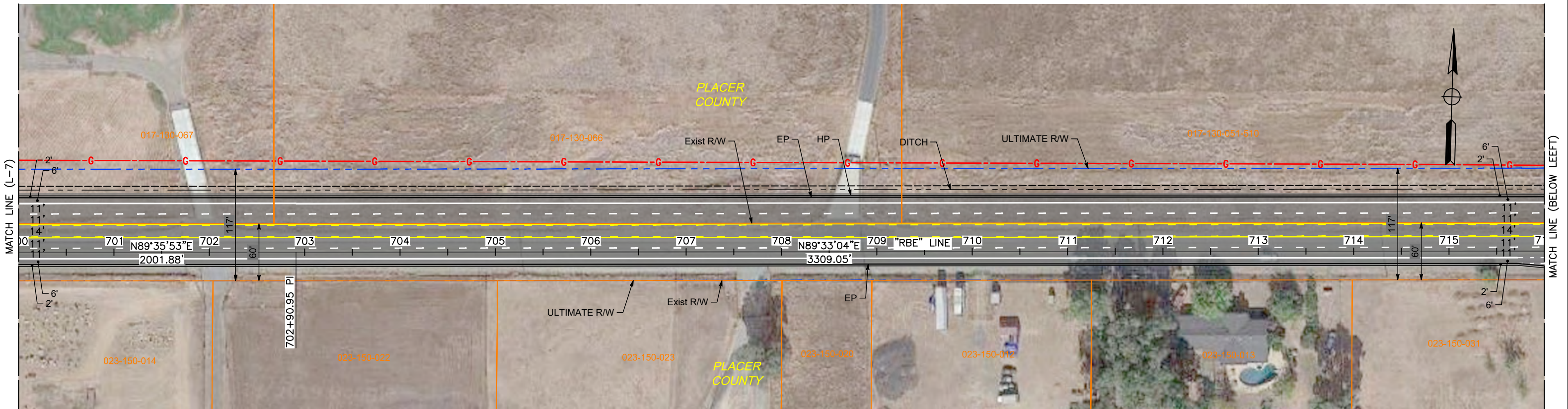
BASELINE ROAD



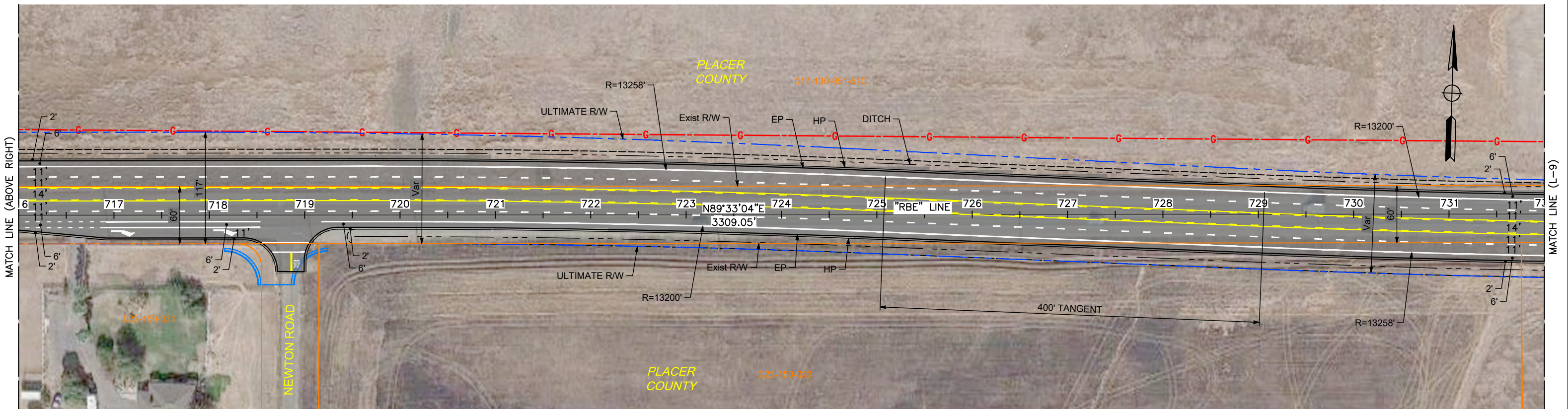
BASELINE ROAD

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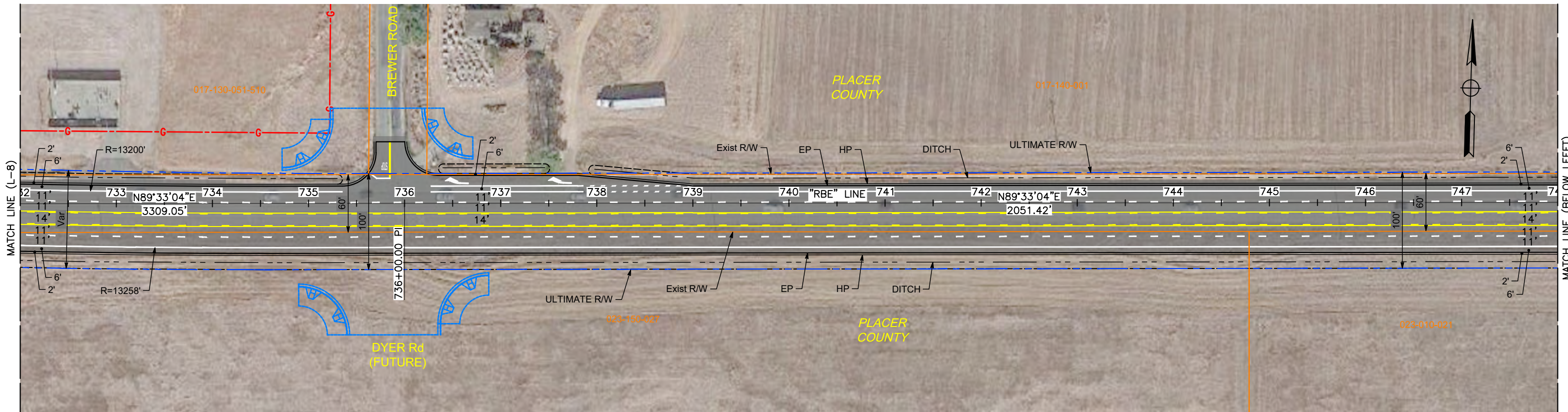
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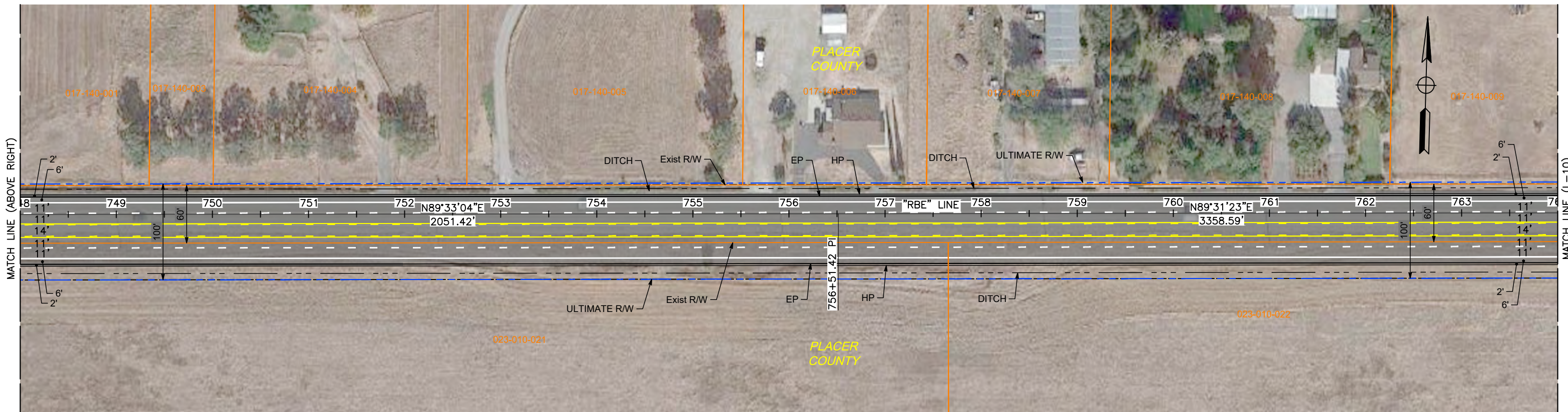
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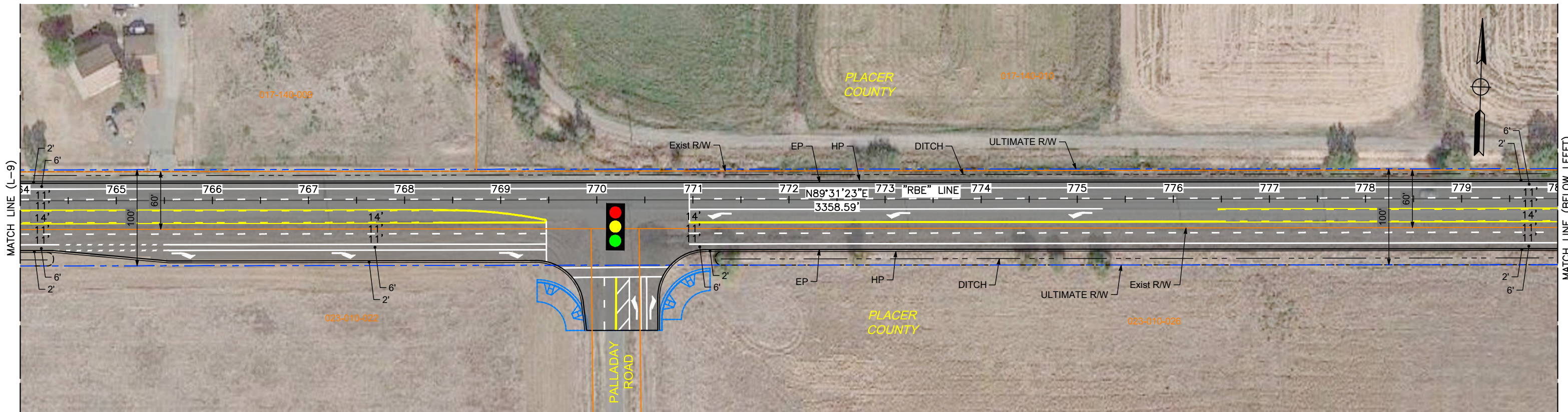


BASELINE ROAD

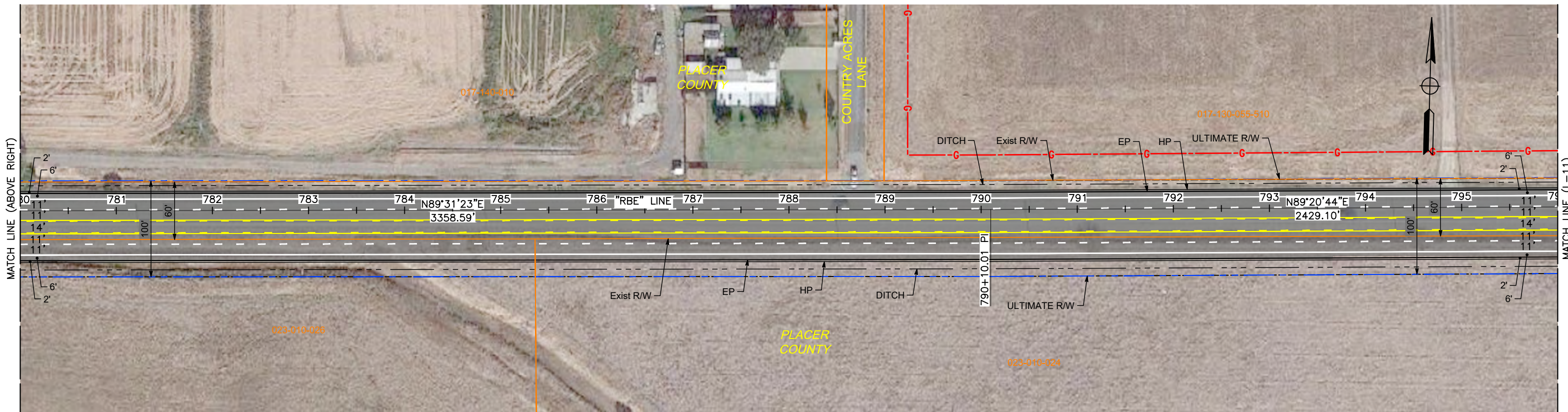


BASELINE ROAD





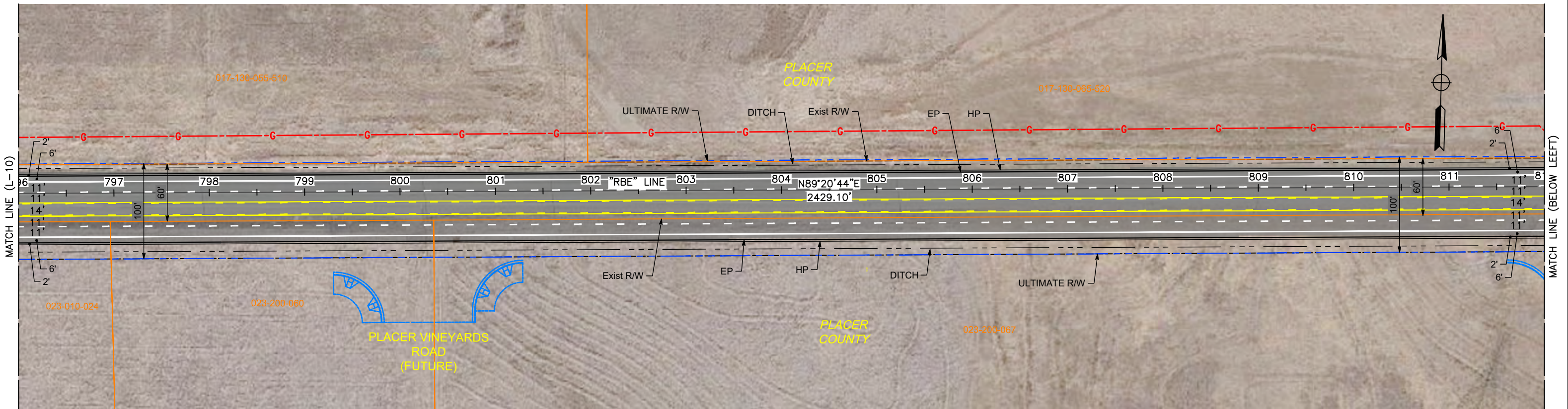
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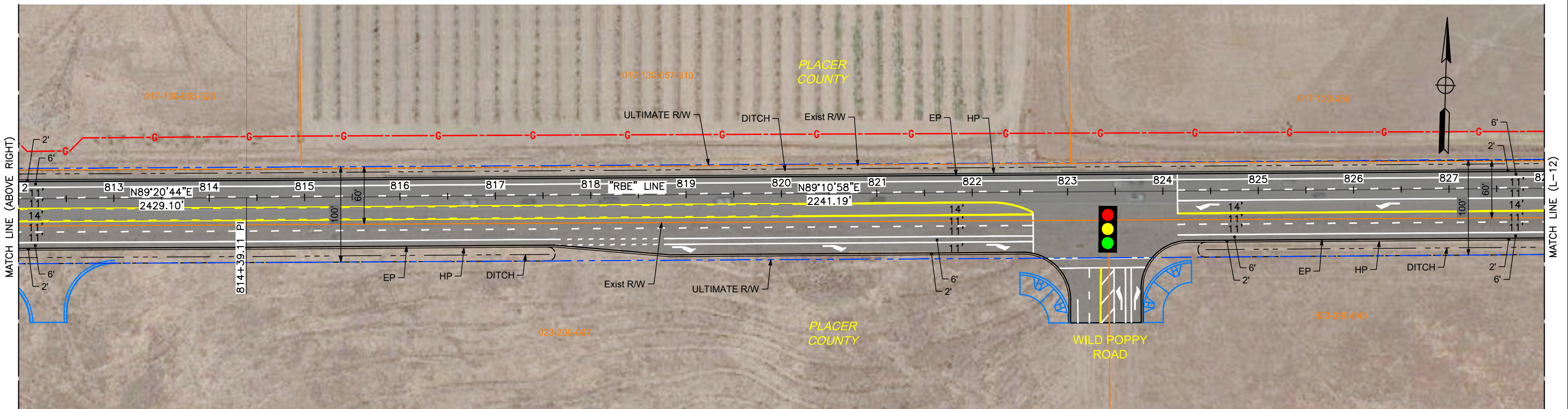
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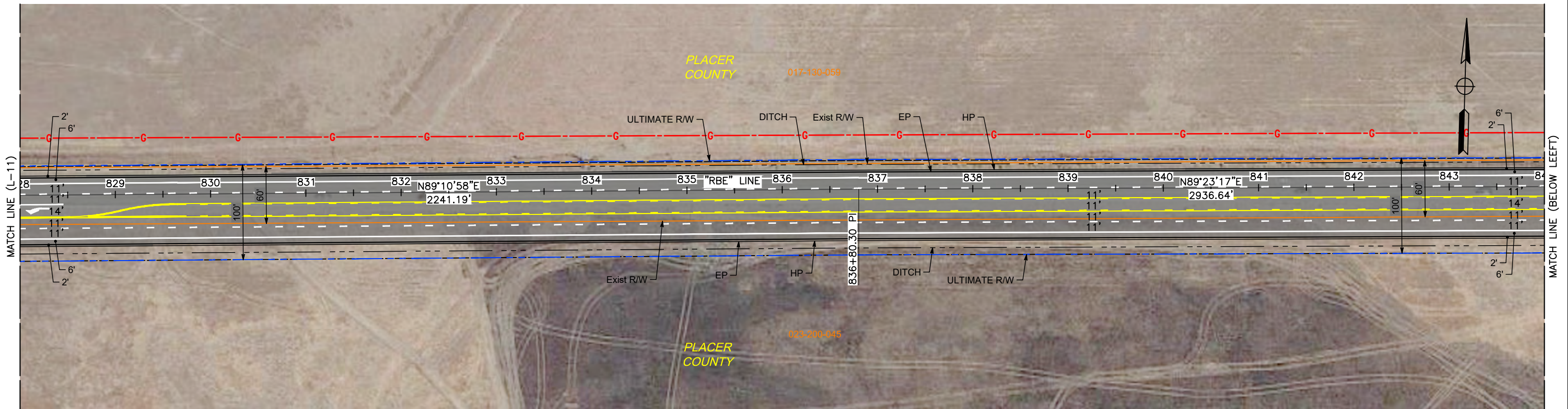


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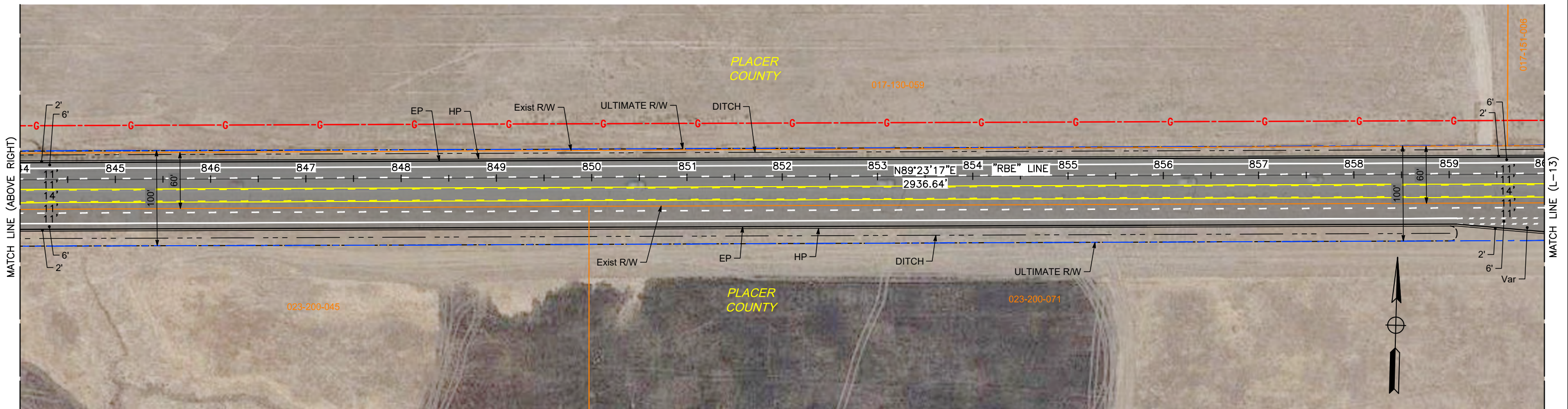


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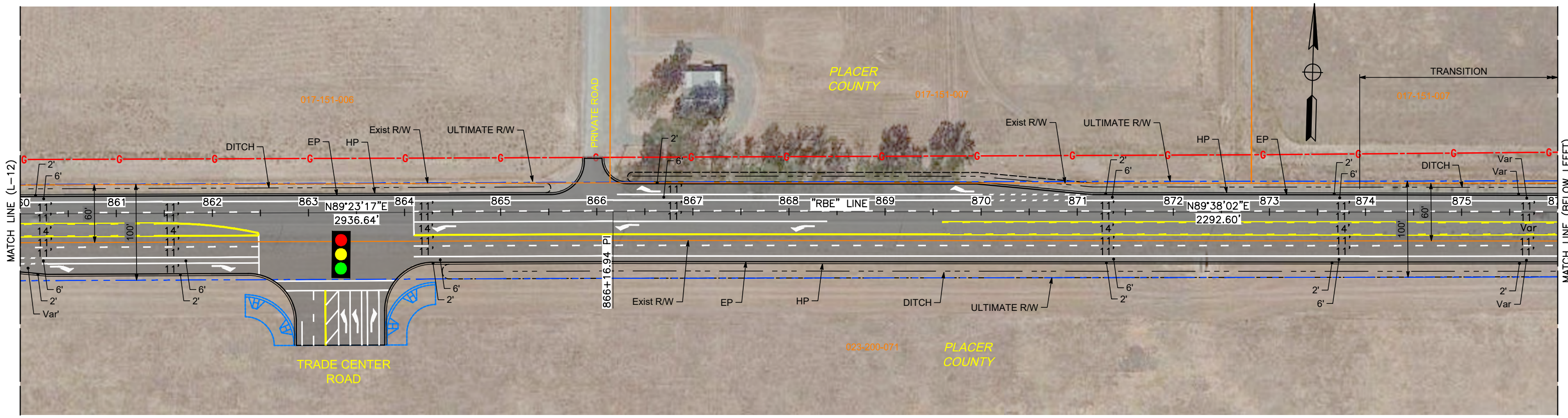


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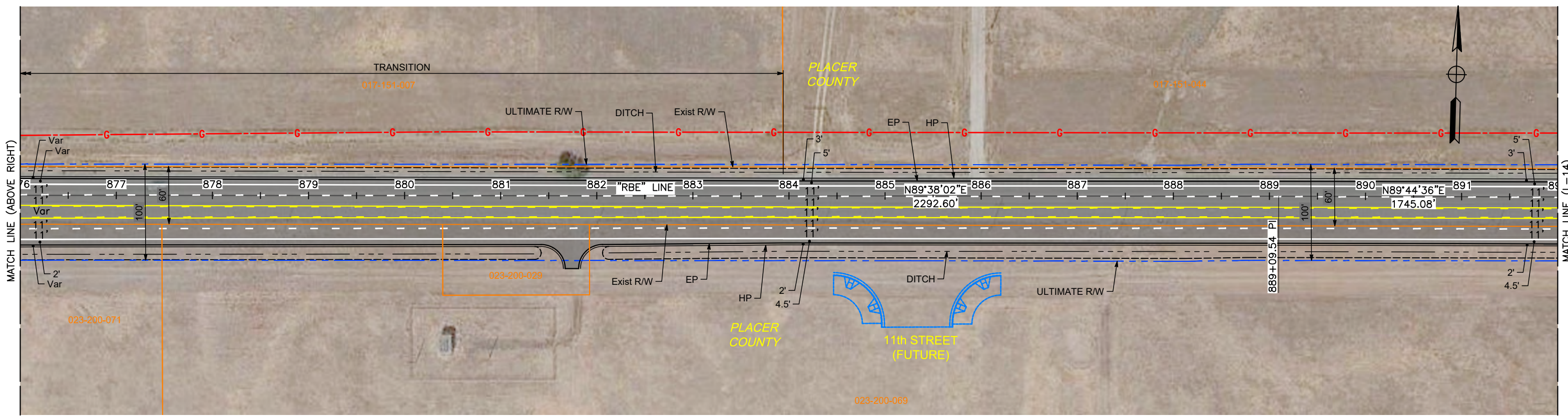


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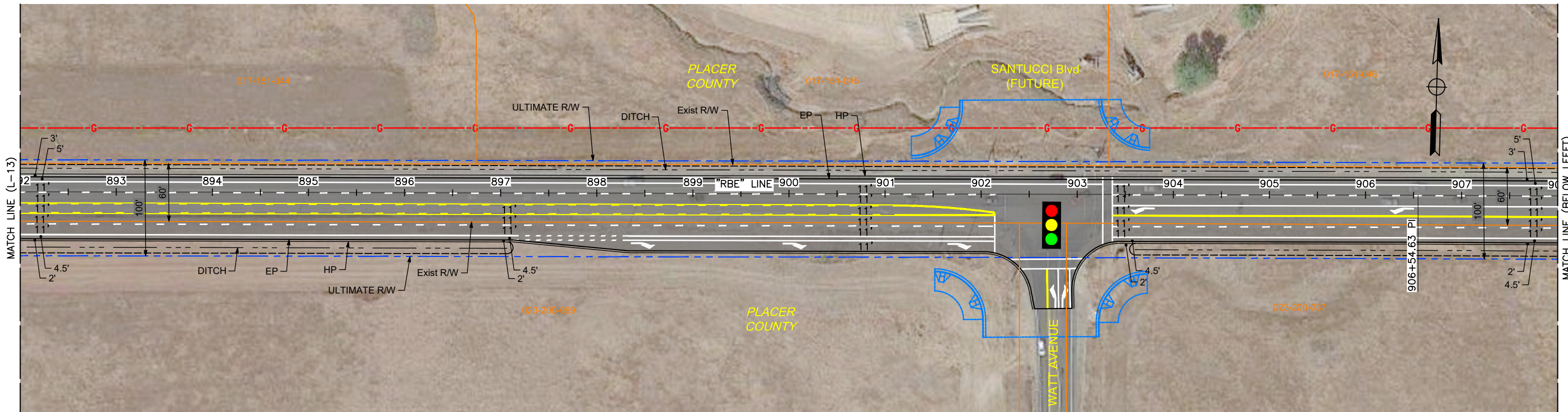
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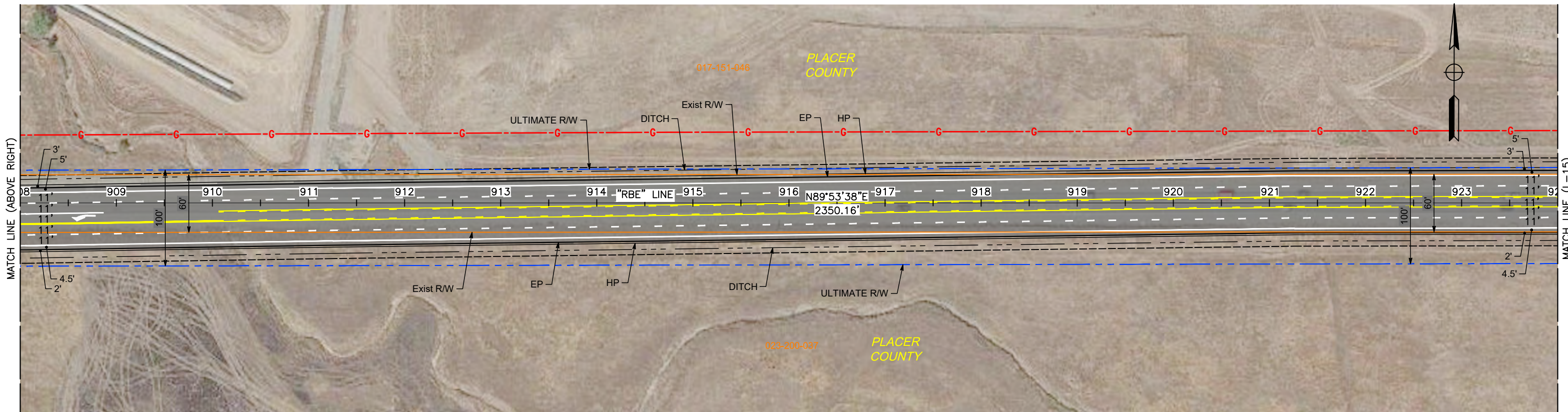
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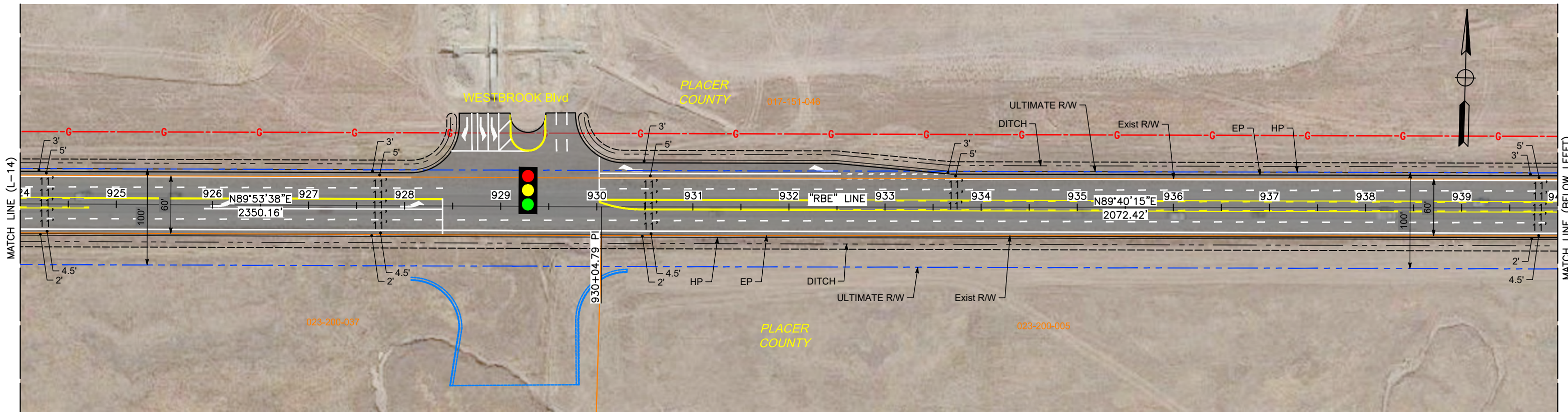
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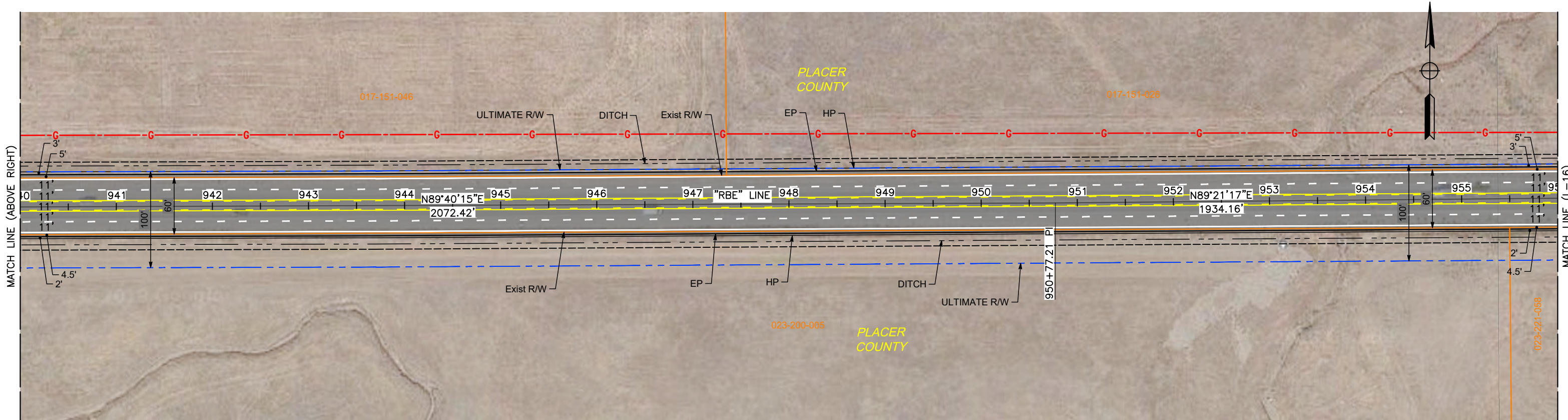
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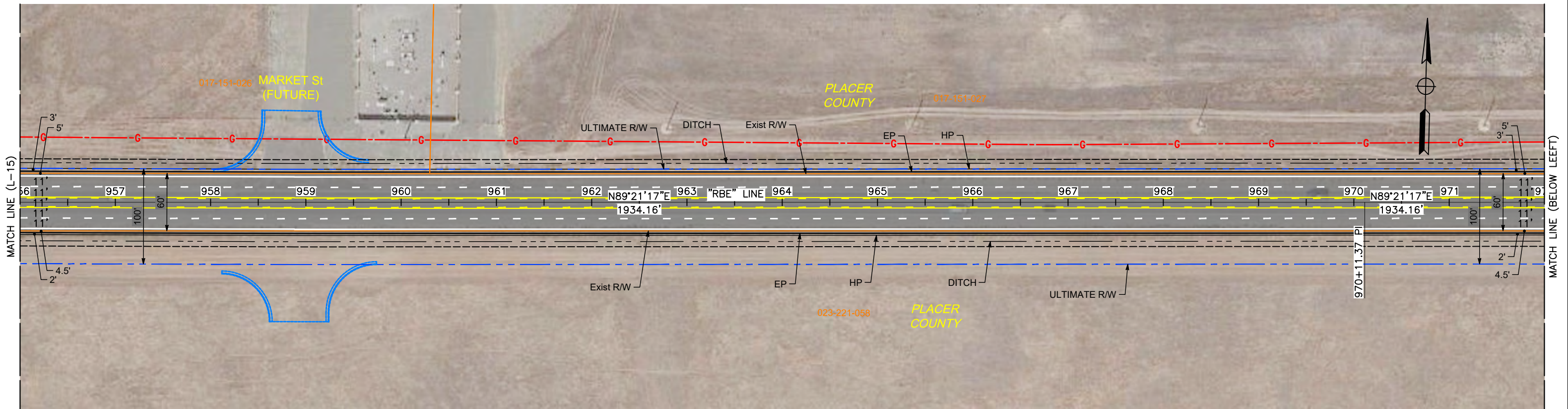
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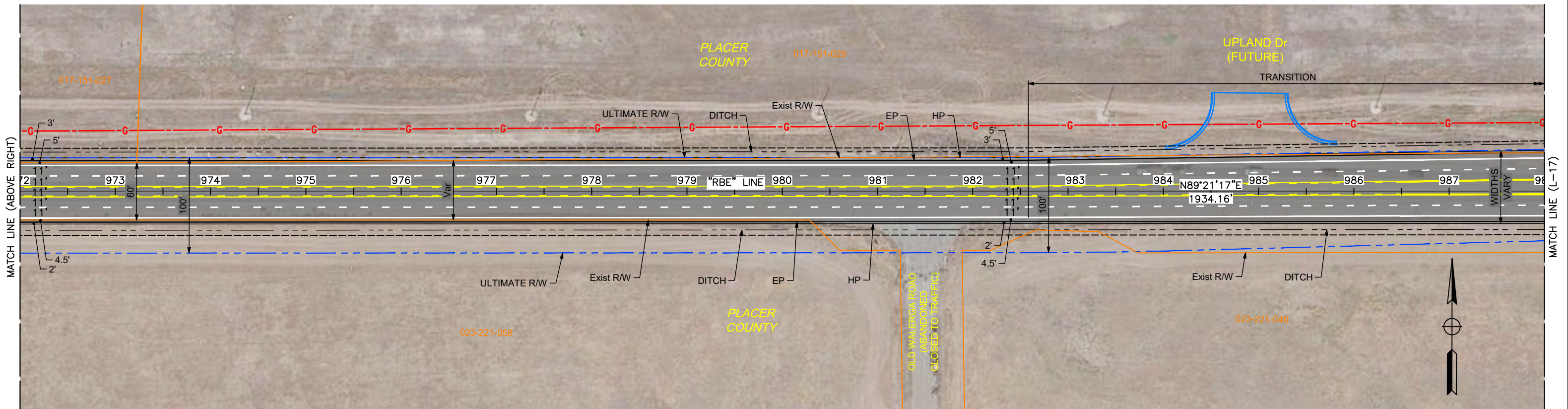
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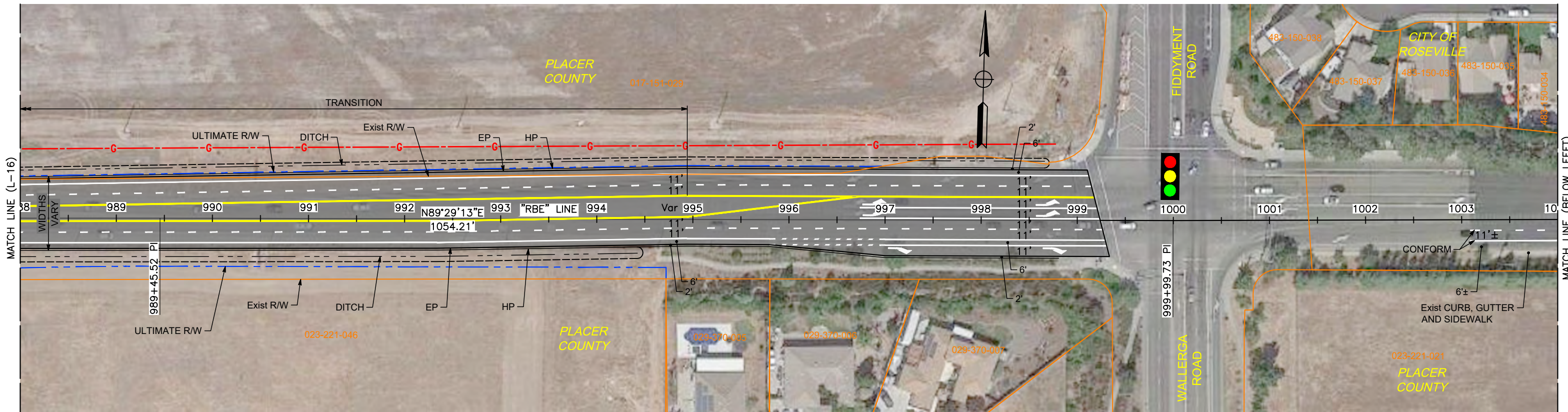
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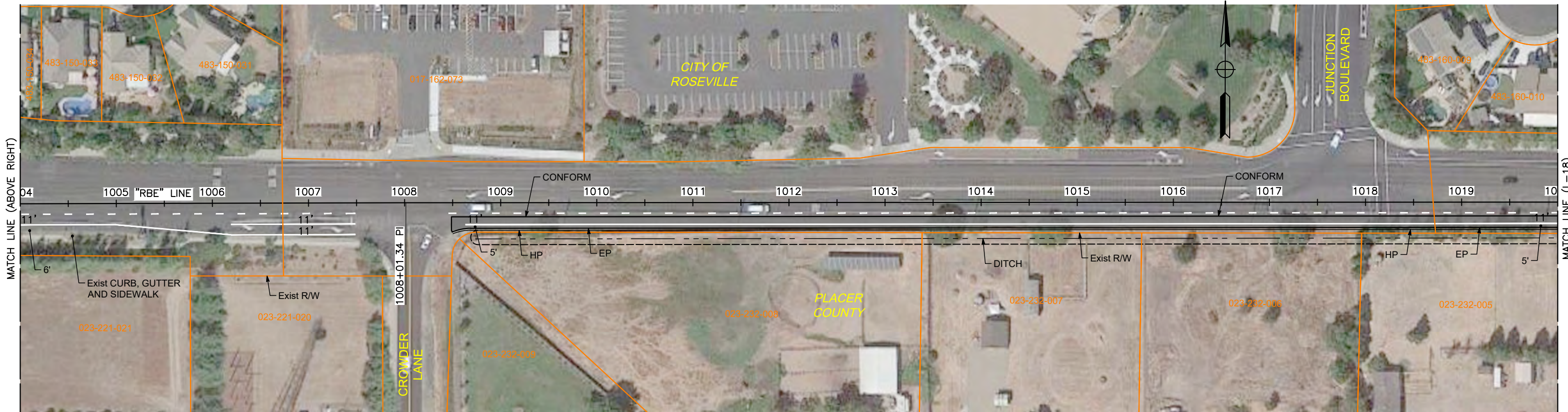
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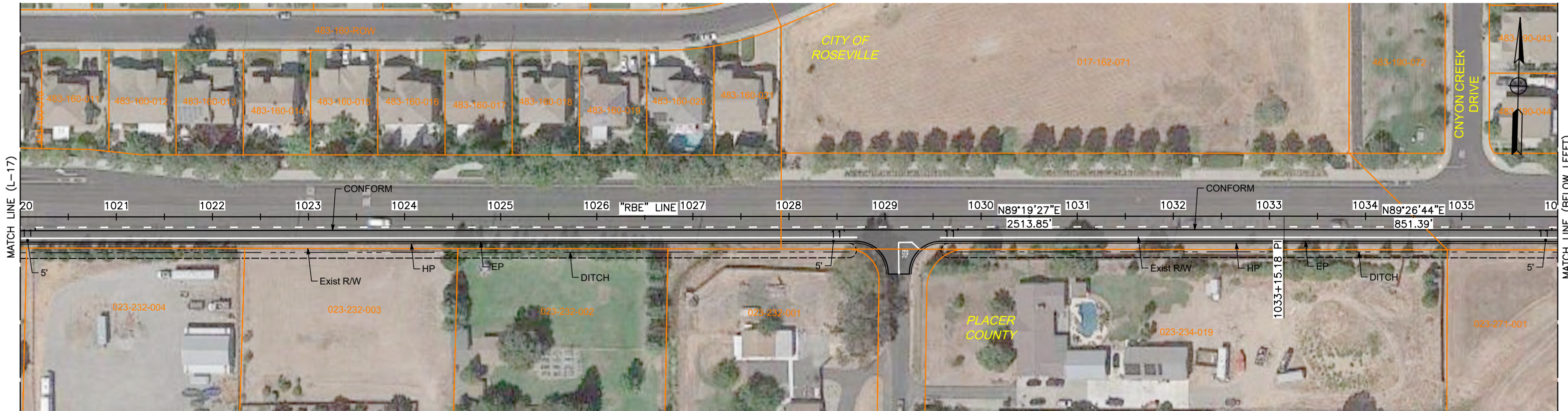
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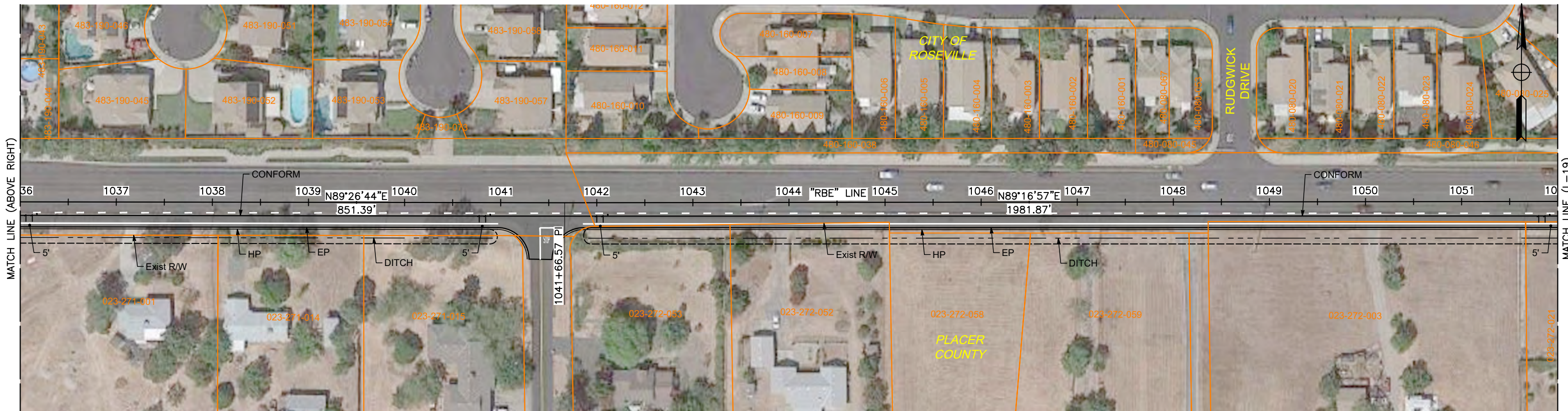
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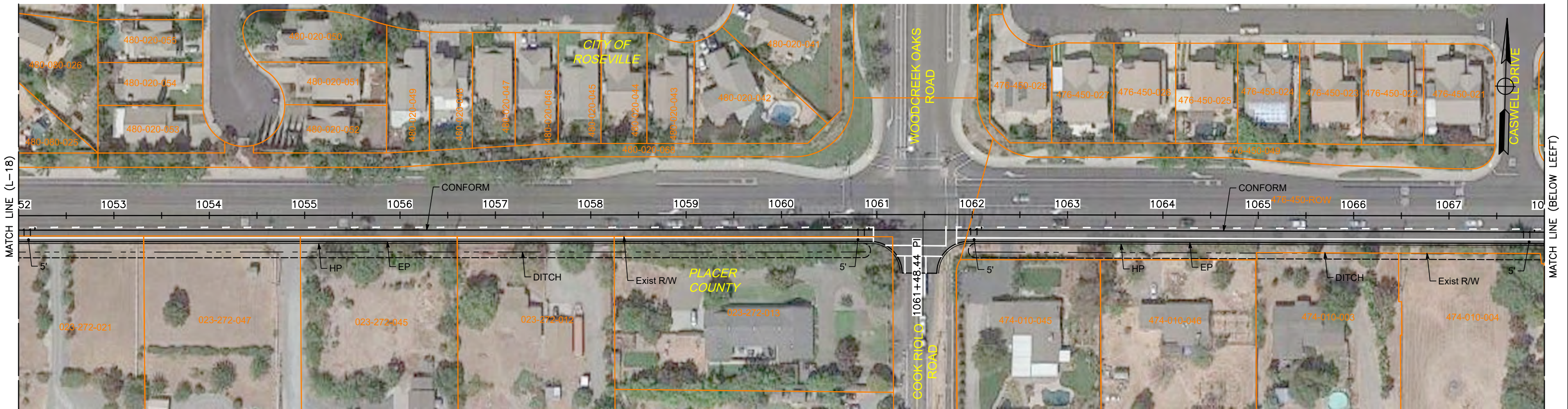
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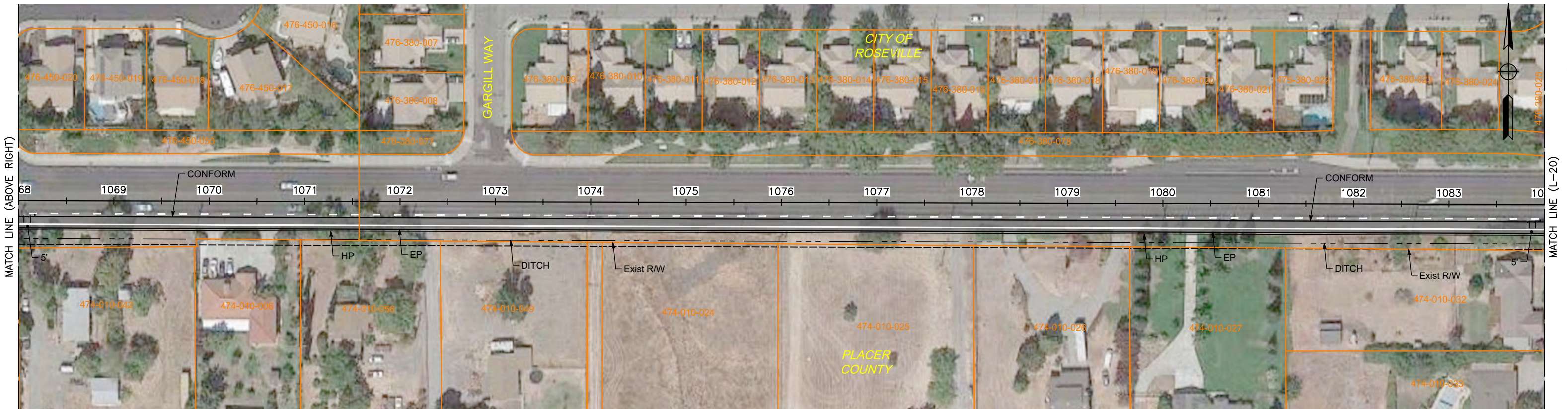
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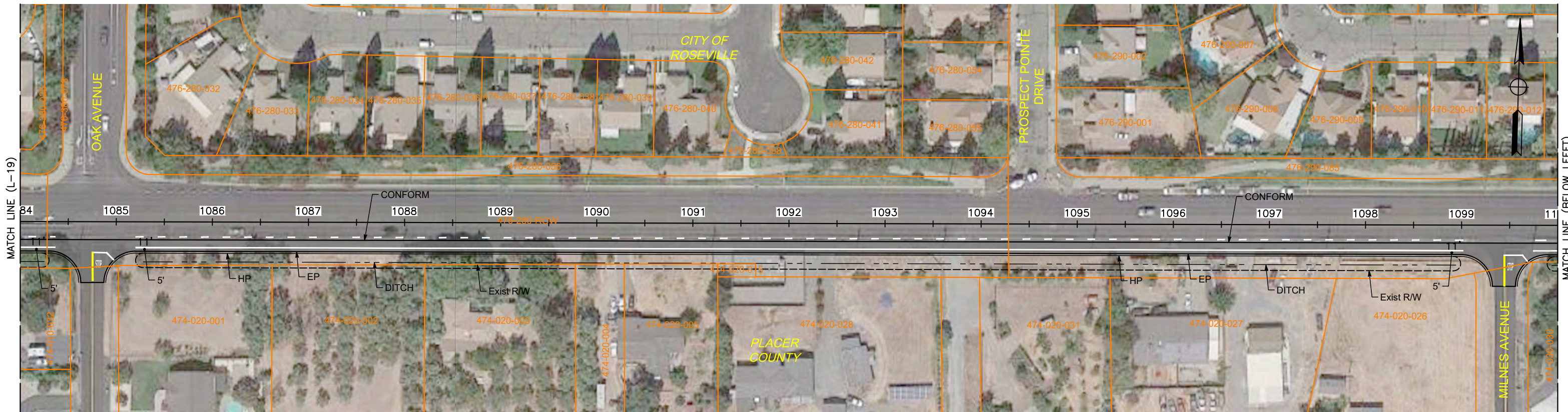
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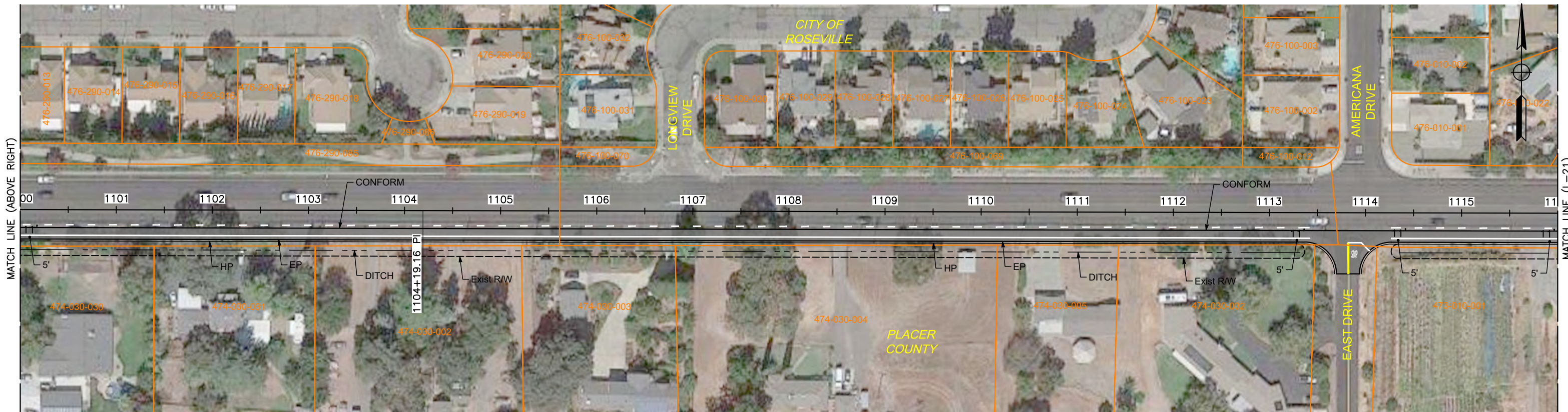
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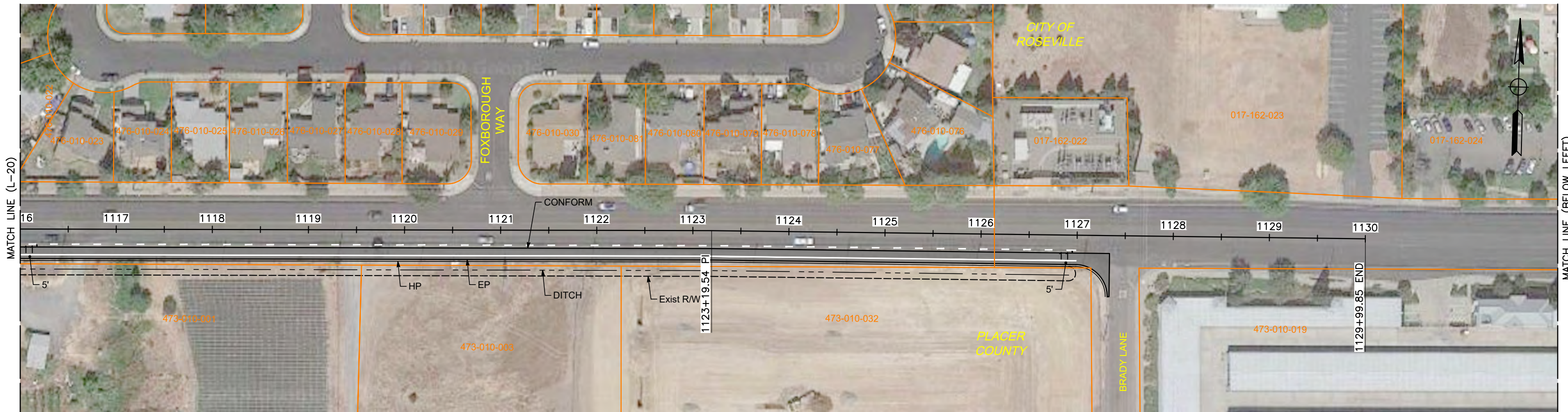
BASELINE ROAD



BASELINE ROAD

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BASELINE ROAD



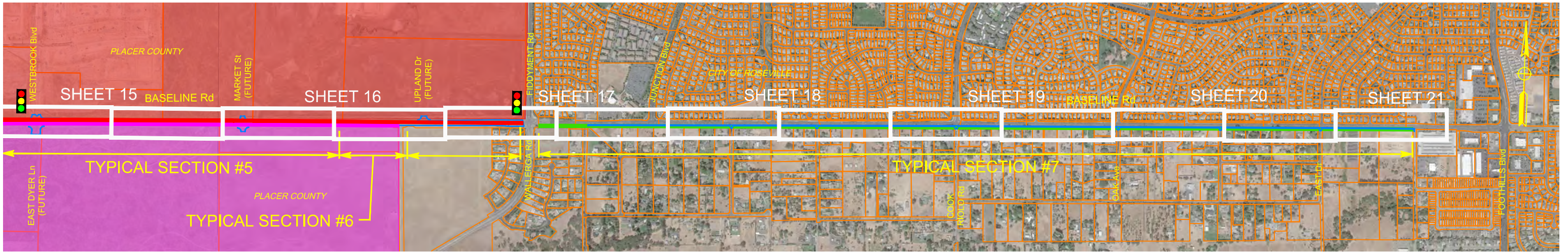
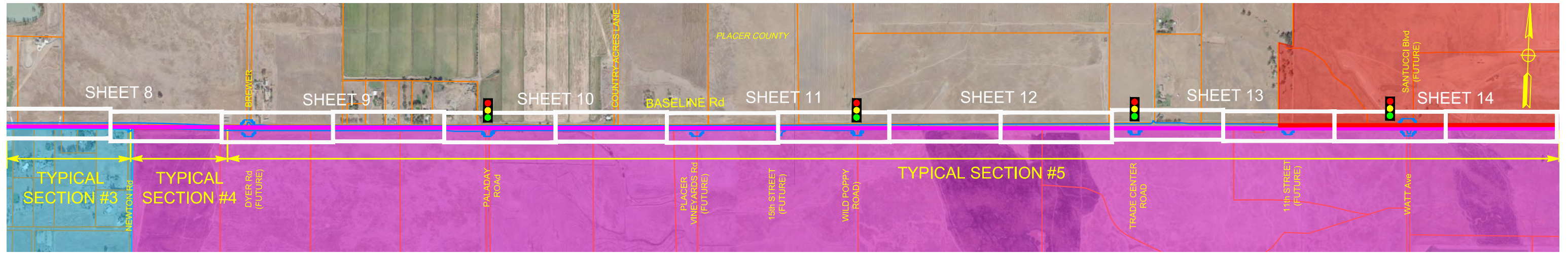
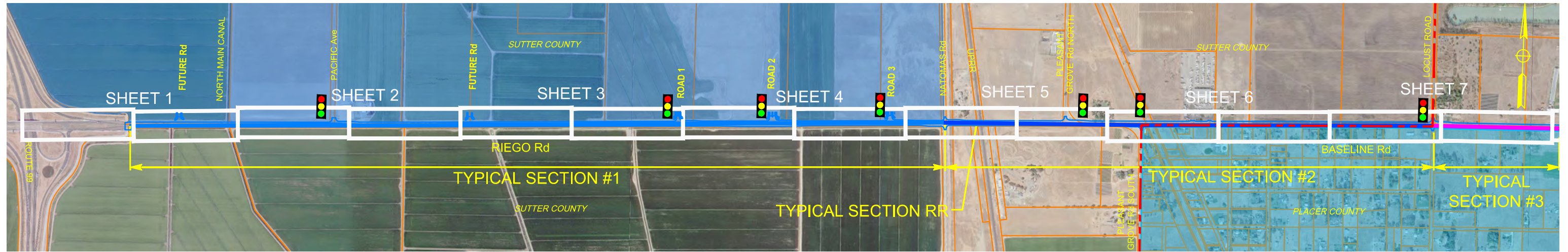
BASELINE ROAD

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# ALTERNATIVE 2

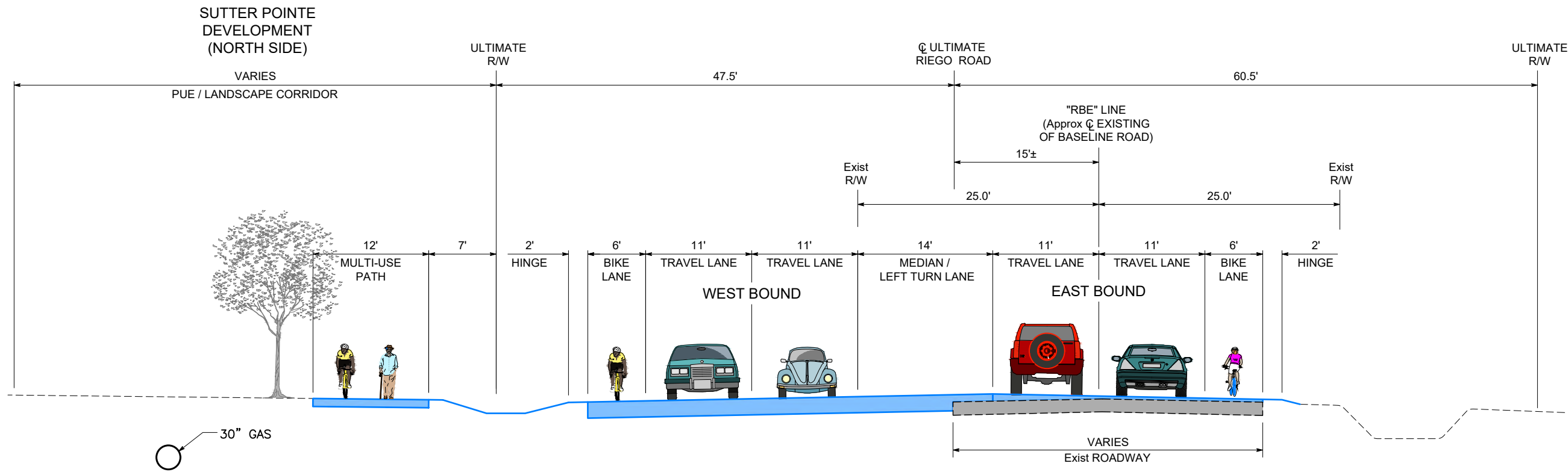




**LEGEND:**

- |   |  |   |   |
|---|--|---|---|
|  | SUTTER POINTE DEVELOPMENT                |  | PROPOSED RIEGO ROAD WIDENING (SUTTER POINTE)          |
|  | PLACER VINEYARDS (SPECIAL PLANNING AREA) |  | PROPOSED RIEGO ROAD / BASELINE ROAD WIDENING (COUNTY) |
|  | PLACER VINEYARDS DEVELOPMENT             |  | PROPOSED BASELINE ROAD WIDENING (PLACER VINEYARDS)    |
|  | SIERRA VISTA DEVELOPMENT                 |  | PROPOSED BASELINE ROAD WIDENING (SIERRA VISTA)        |
|  | COUNTY LINE                              |  | PROPOSED BASELINE ROAD WIDENING (ROSEVILLE)           |

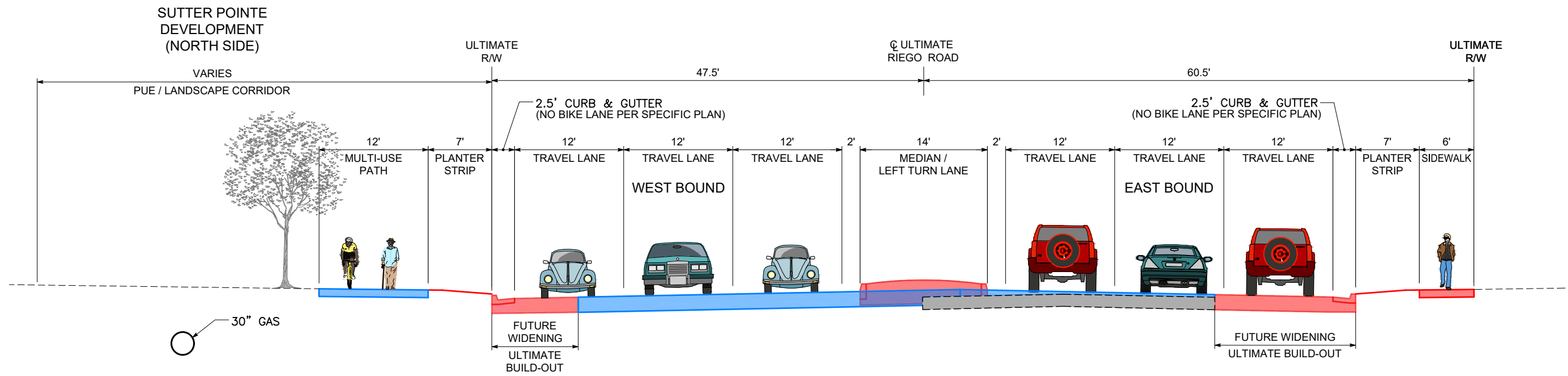




**RIEGO ROAD - TYPICAL SECTION (INTERIM)**  
**FROM ROUTE 99 TO NATOMAS ROAD**

LAYOUT SHEETS 1 TO 5  
 NO SCALE

NOTE:  
 30" GAS LINE WITHIN 50' PG&E EASEMENT

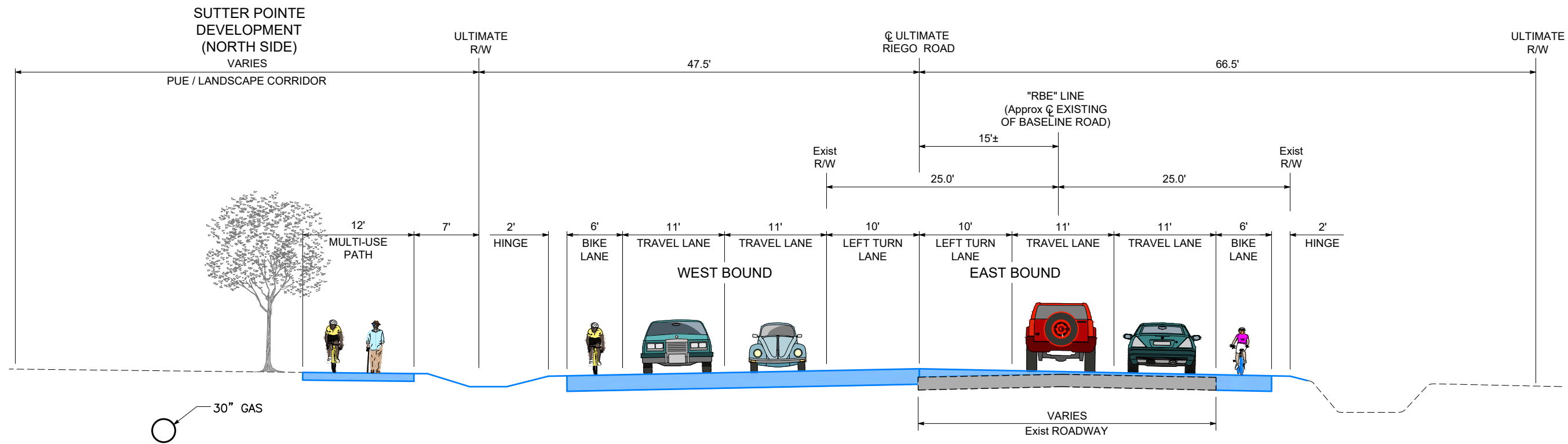


**RIEGO ROAD - TYPICAL SECTION (ULTIMATE)**  
**FROM ROUTE 99 TO NATOMAS ROAD**

NO SCALE

**TYPICAL SECTION #1**  
**ALTERNATIVE 2**

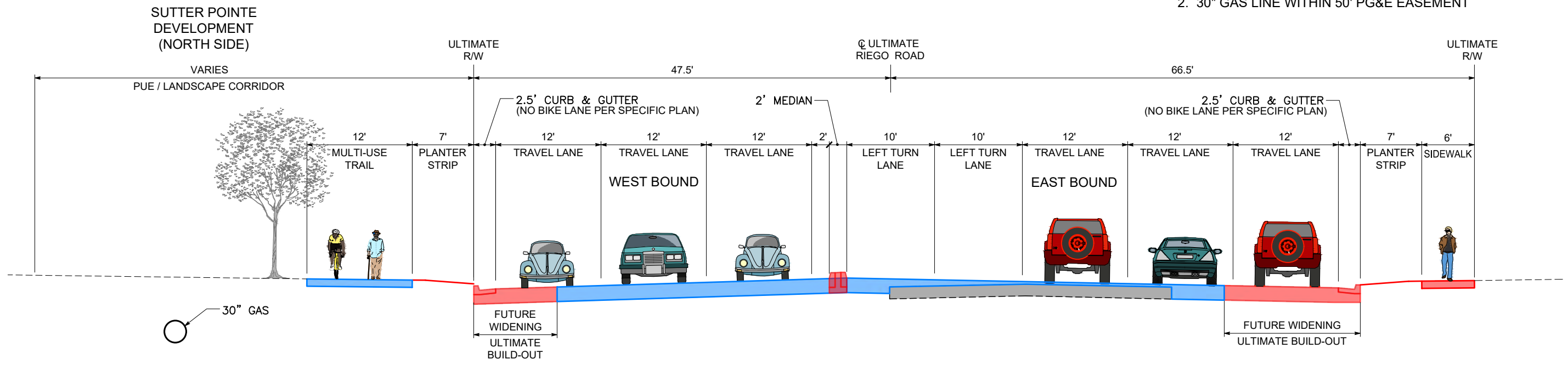




**RIEGO ROAD - TYPICAL SECTION (INTERIM)**  
**NORTHBOUND RIEGO ROAD AT INTERSECTION WITH DUAL LEFT TURN LANES**

LAYOUT SHEET 4  
 NO SCALE

- NOTES:
1. 2-WAY LEFT TURN LANE ACCOMODATES LEFT TURN LANES WHERE NEEDED
  2. 30" GAS LINE WITHIN 50' PG&E EASEMENT

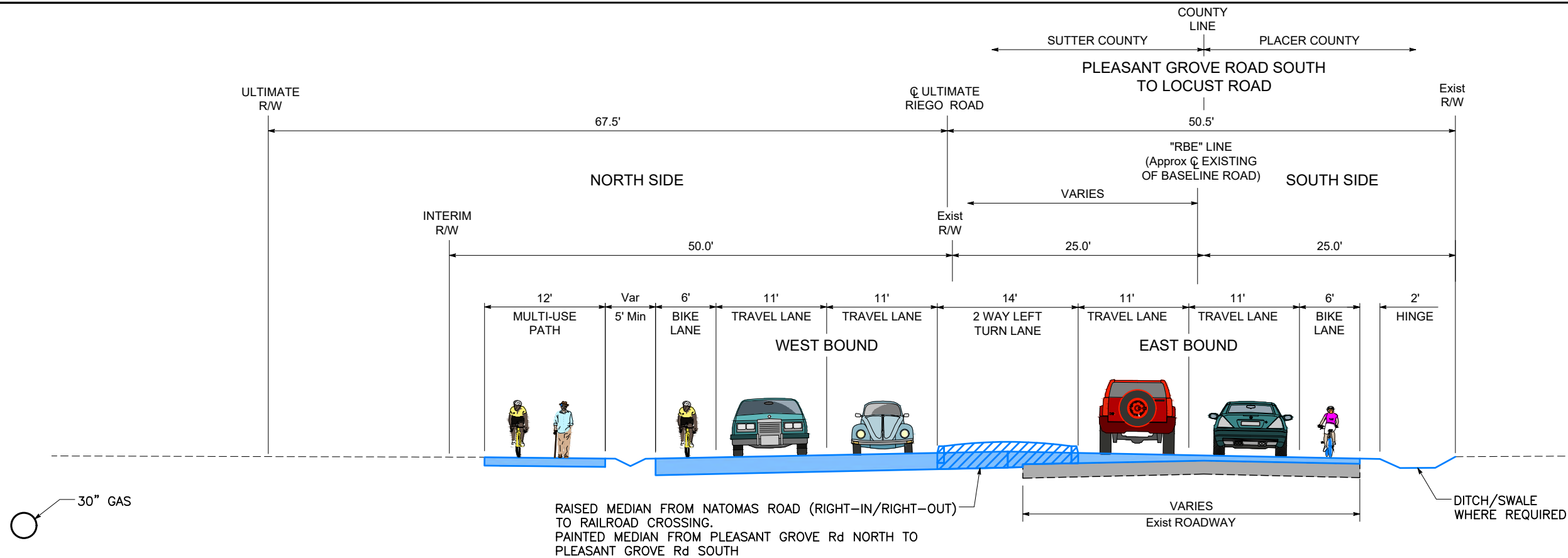


**RIEGO ROAD - TYPICAL SECTION (ULTIMATE)**  
**NORTHBOUND RIEGO ROAD AT INTERSECTION WITH DUAL LEFT TURN LANES**

NO SCALE

**TYPICAL SECTION #1A**  
**ALTERNATIVE 2**

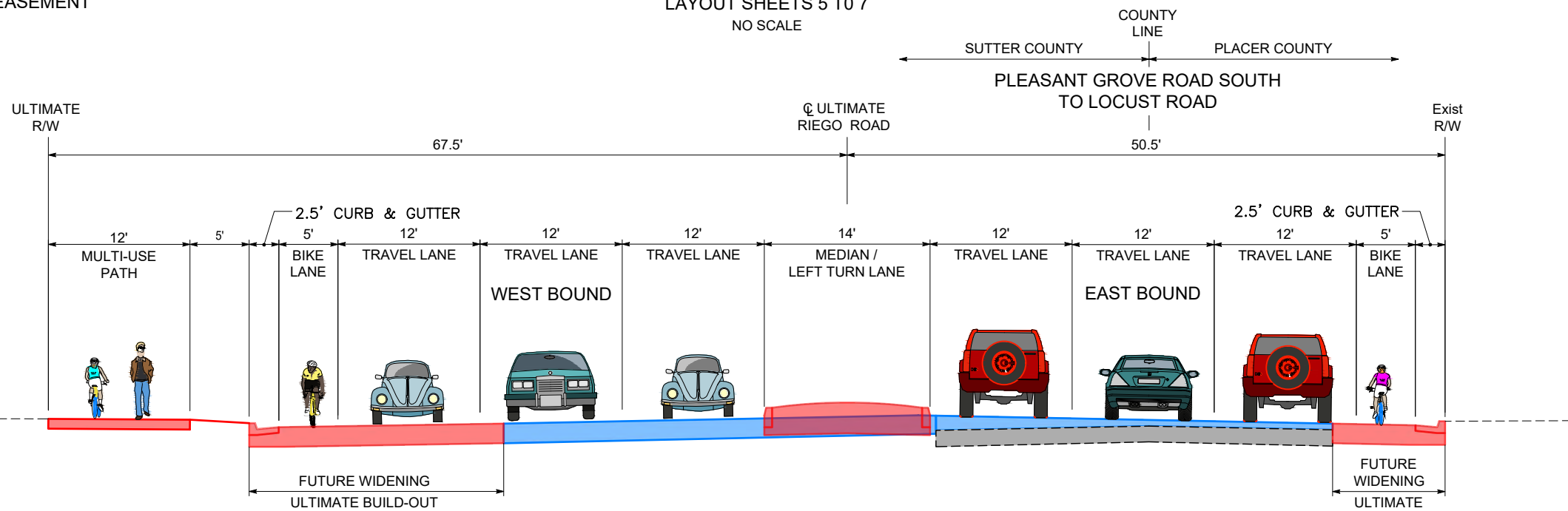
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**RIEGO ROAD - TYPICAL SECTION (INTERIM)**  
**NATOMAS ROAD TO LOCUST ROAD**

LAYOUT SHEETS 5 TO 7  
 NO SCALE

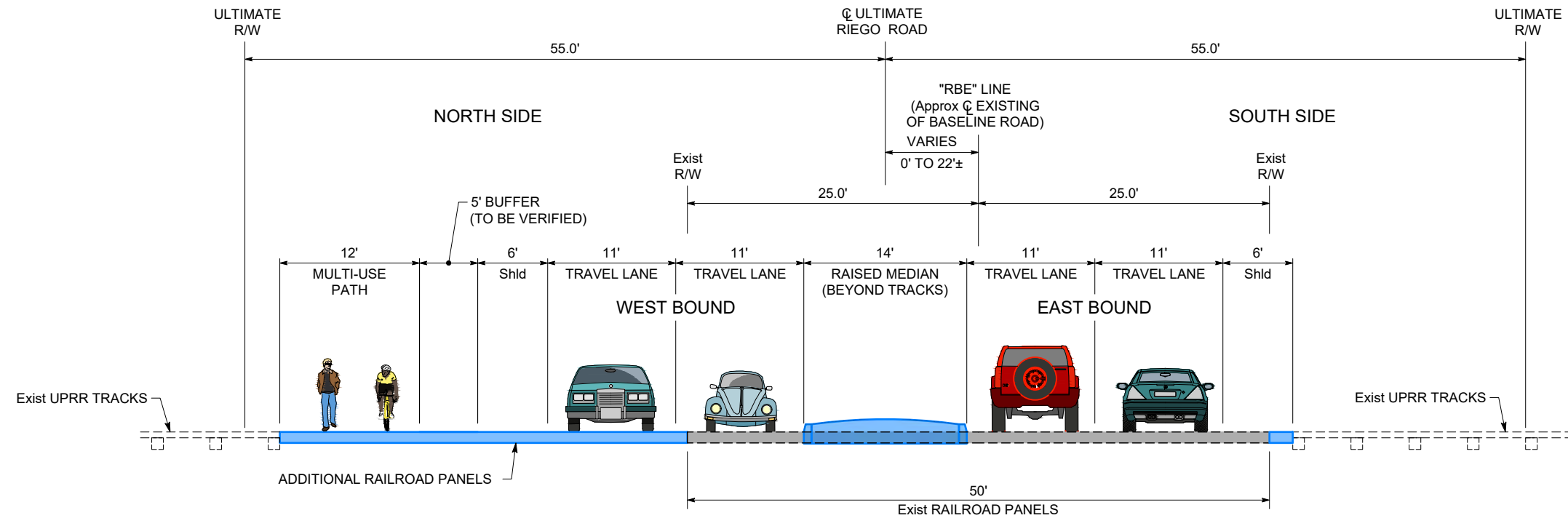
- NOTES:
1. RAILROAD CROSSING NOT SHOWN
  2. 2-WAY LEFT TURN LANE ACCOMODATES LEFT TURN LANES WHERE NEEDED.
  3. 3' GAS LINE WITHIN 50' PG&E EASEMENT



**RIEGO ROAD - TYPICAL SECTION (ULTIMATE)**  
**NATOMAS ROAD TO LOCUST ROAD**

NO SCALE

**TYPICAL SECTION #2**  
**ALTERNATIVE 2**



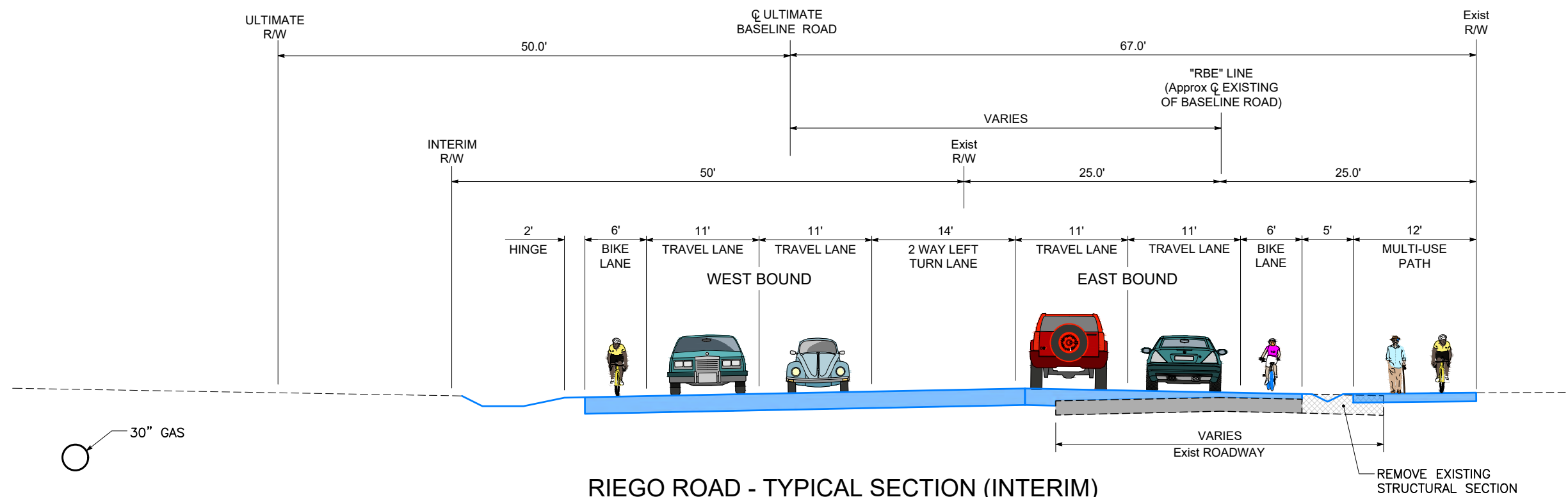
**RIEGO ROAD - TYPICAL SECTION (INTERIM)  
UNION PACIFIC RAILROAD AT GRADE CROSSING**

LAYOUT SHEET 5  
NO SCALE

**RIEGO ROAD - TYPICAL SECTION (ULTIMATE )  
UNION PACIFIC RAILROAD GRADE SEPARATION - TO BE DETERMINED**

**TYPICAL SECTION RR  
ALTERNATIVE 2**

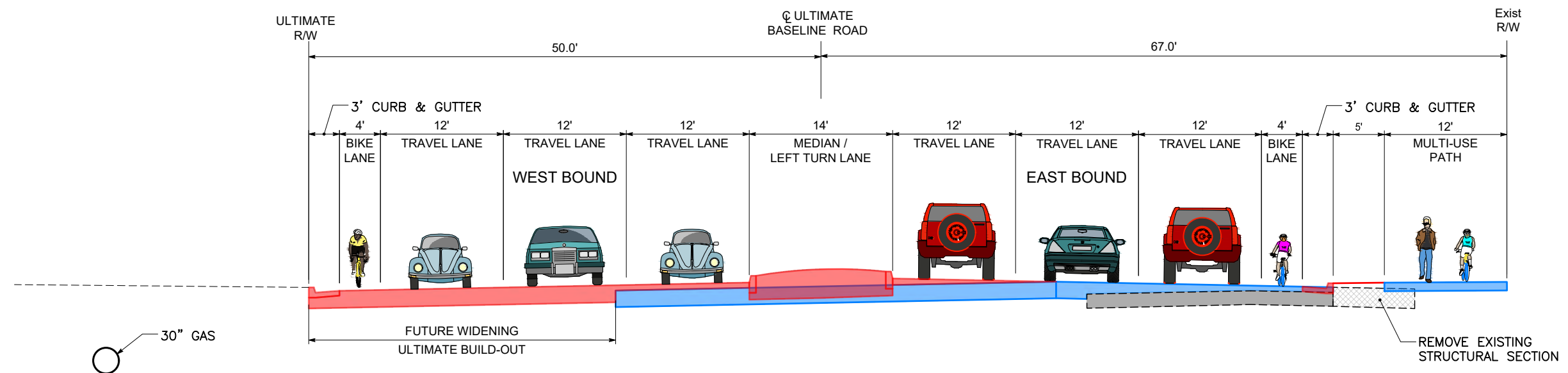




**RIEGO ROAD - TYPICAL SECTION (INTERIM)**  
**LOCUST ROAD TO NEWTON ROAD**

LAYOUT SHEETS 7 TO 8  
 NO SCALE

- NOTES:
1. 2-WAY LEFT TURN LANE ACCOMODATES LEFT TURN LANES WHERE NEEDED
  2. 30" GAS LINE WITHIN 50' PG&E EASEMENT

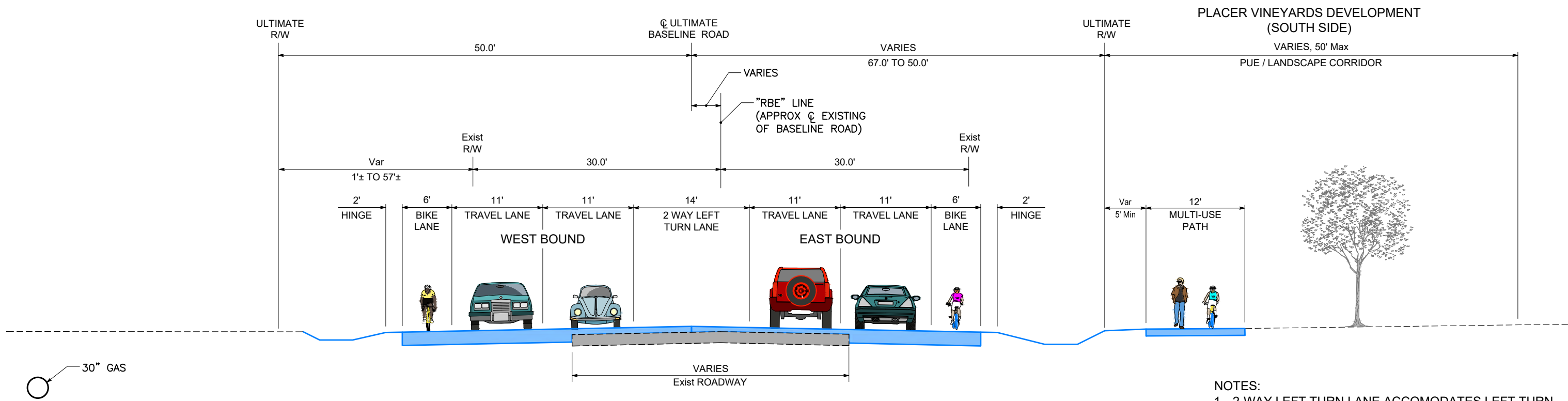


**RIEGO ROAD - TYPICAL SECTION (ULTIMATE)**  
**LOCUST ROAD TO NEWTON ROAD**

NO SCALE

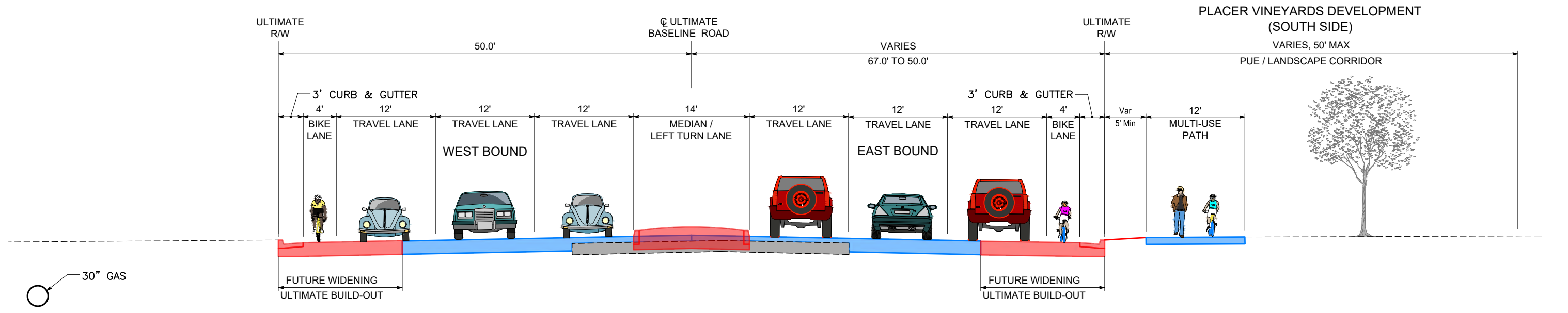
**TYPICAL SECTION #3**  
**ALTERNATIVE 2**

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**BASELINE ROAD - TYPICAL SECTION (INTERIM) TRANSITION**  
**NEWTON ROAD TO BREWER ROAD**  
 LAYOUT SHEETS 8 TO 9  
 NO SCALE

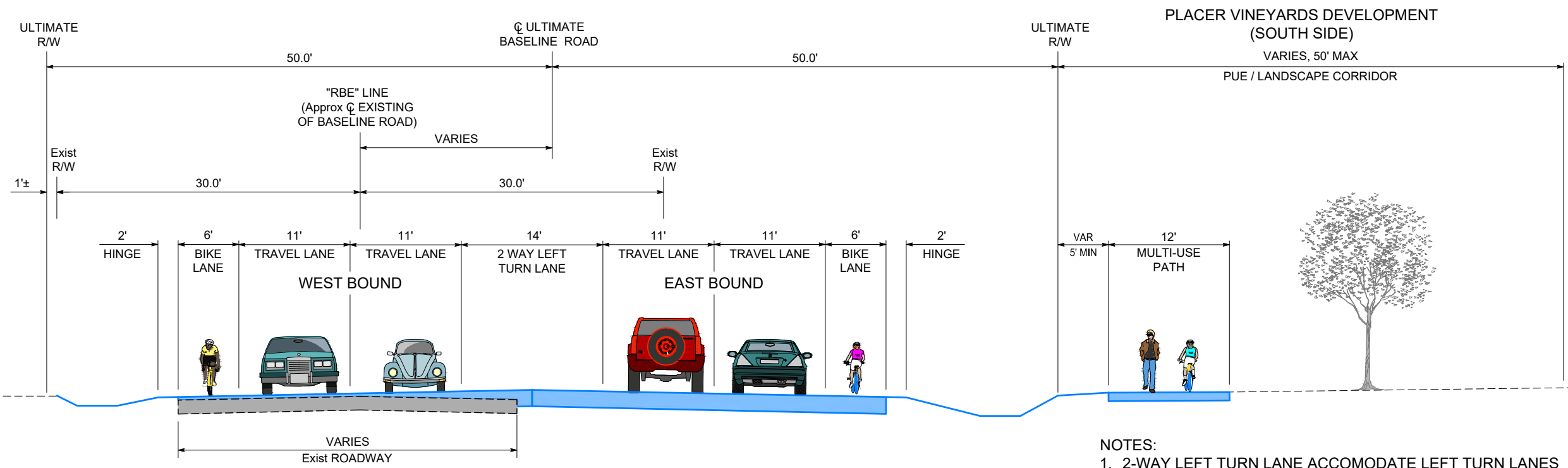
- NOTES:
1. 2-WAY LEFT TURN LANE ACCOMODATES LEFT TURN LANES WHERE NEEDED
  2. 30" GAS LINE WITHIN 50' PG&E EASEMENT



**BASELINE ROAD - TYPICAL SECTION (ULTIMATE)**  
**NEWTON ROAD TO BREWER ROAD**  
 NO SCALE

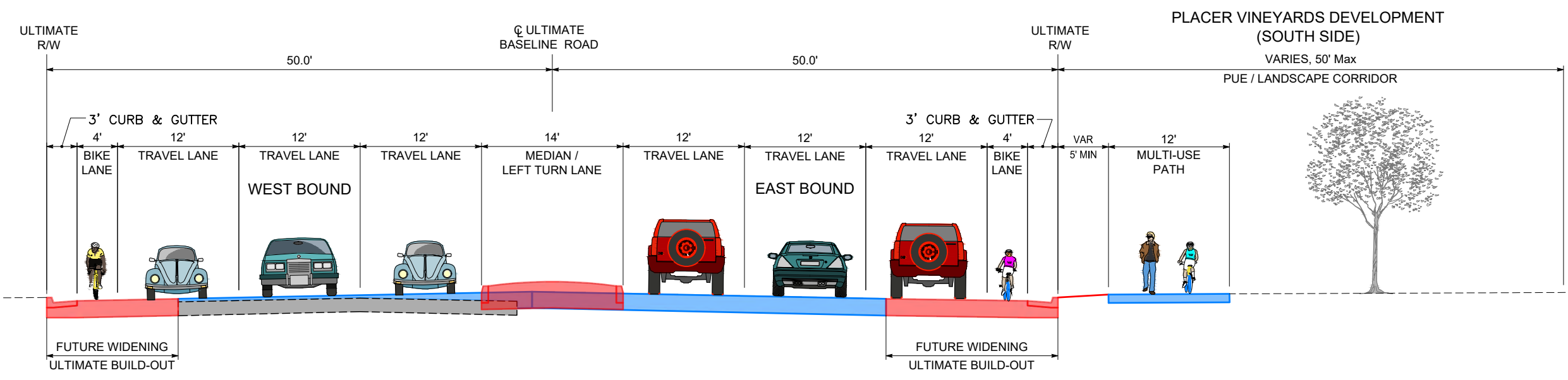
**TYPICAL SECTION #4**  
**ALTERNATIVE 2**

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**BASELINE ROAD - TYPICAL SECTION (INTERIM)**  
**BREWER ROAD TO SIERRAVISTA (WEST BOUNDARY)**  
 LAYOUT SHEETS 9 TO 13  
 NO SCALE

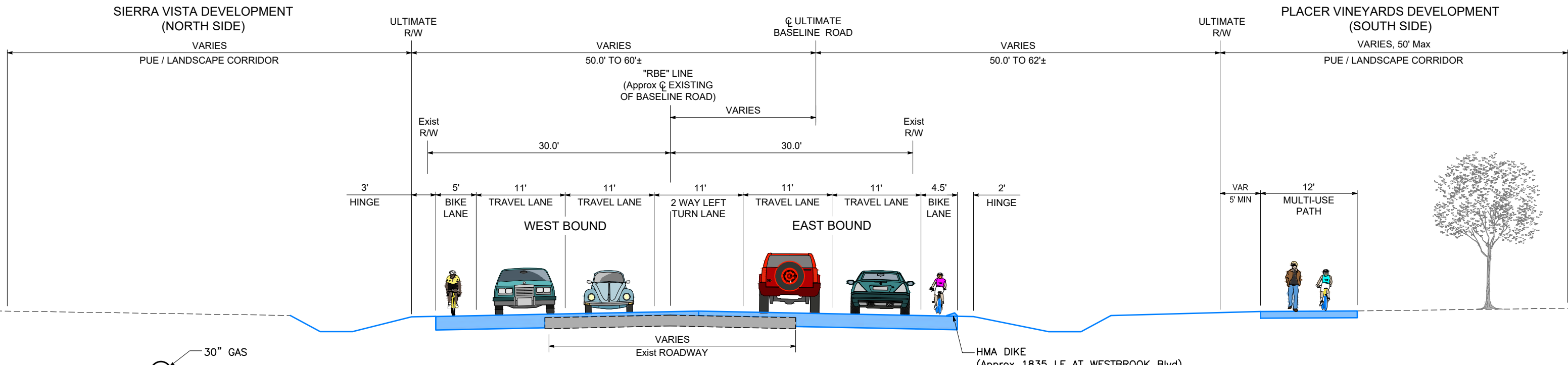
- NOTES:
1. 2-WAY LEFT TURN LANE ACCOMODATE LEFT TURN LANES WHERE NEEDED.
  2. 30" GAS LINE SHOWN FROM COUNTRY ACRES LANE TO SIERRA VISTA BOUNDARY ONLY
  3. 30" GAS LINE WITHIN 50' PG&E EASEMENT
  4. 2-WAY LEFT TURN LANE, BIKE LANES AND WESTBOUND HINGE TRANSITION BEGINS WEST OF SIERRA VISTA BOUNDARY.



**BASELINE ROAD - TYPICAL SECTION (ULTIMATE)**  
**BREWER ROAD TO SIERRAVISTA (WEST BOUNDARY)**  
 NO SCALE

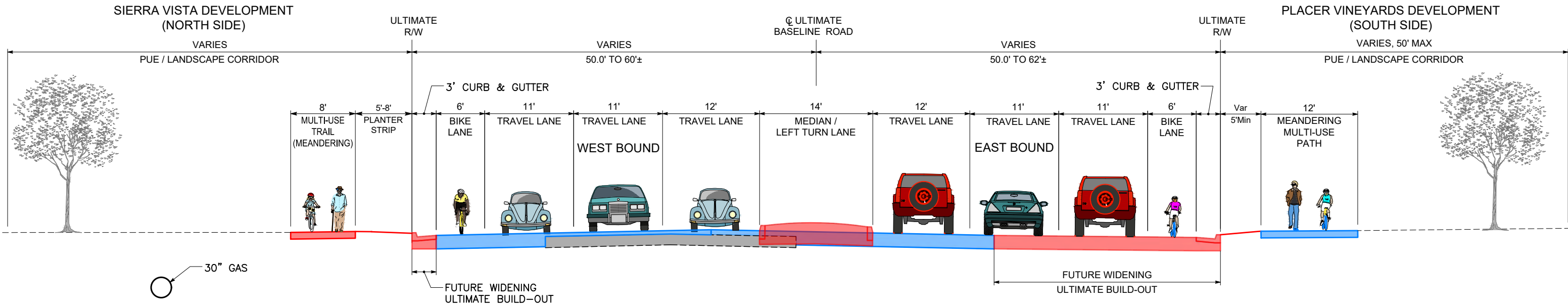
**TYPICAL SECTION #5**  
**ALTERNATIVE 2**

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**BASELINE ROAD - TYPICAL SECTION (INTERIM)**  
**SIERRAVISTA (WEST BOUNDARY) TO FIDDYMENT ROAD / WALERGA ROAD**  
 LAYOUT SHEETS 13 TO 17  
 NO SCALE

- NOTES:  
 1. 2-WAY LEFT TURN LANE ACCOMODATES LEFT TURN LANES WHERE NEEDED  
 2. 30" GAS LINE WITHIN 50' PG&E EASEMENT

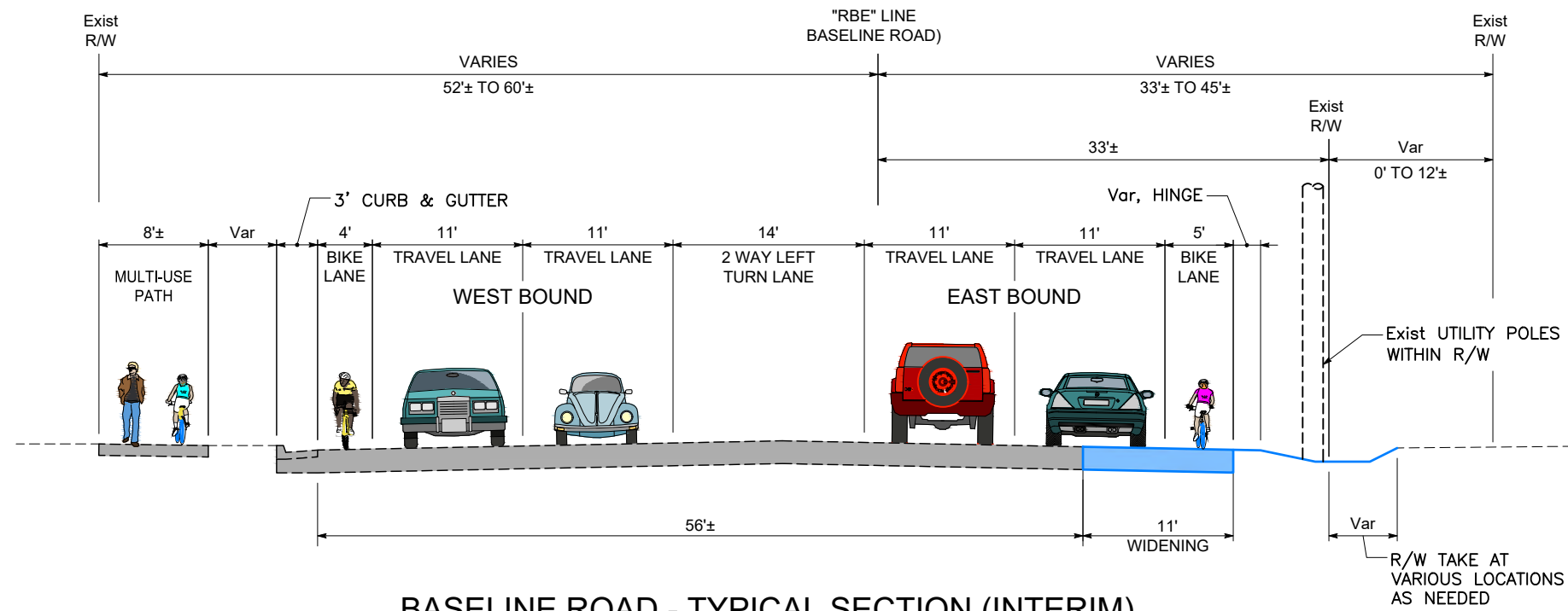


**BASELINE ROAD - TYPICAL SECTION (ULTIMATE)**  
**SIERRAVISTA (WEST BOUNDARY) TO FIDDYMENT ROAD / WALERGA ROAD**  
 NO SCALE

**TYPICAL SECTION #6**  
**ALTERNATIVE 2**

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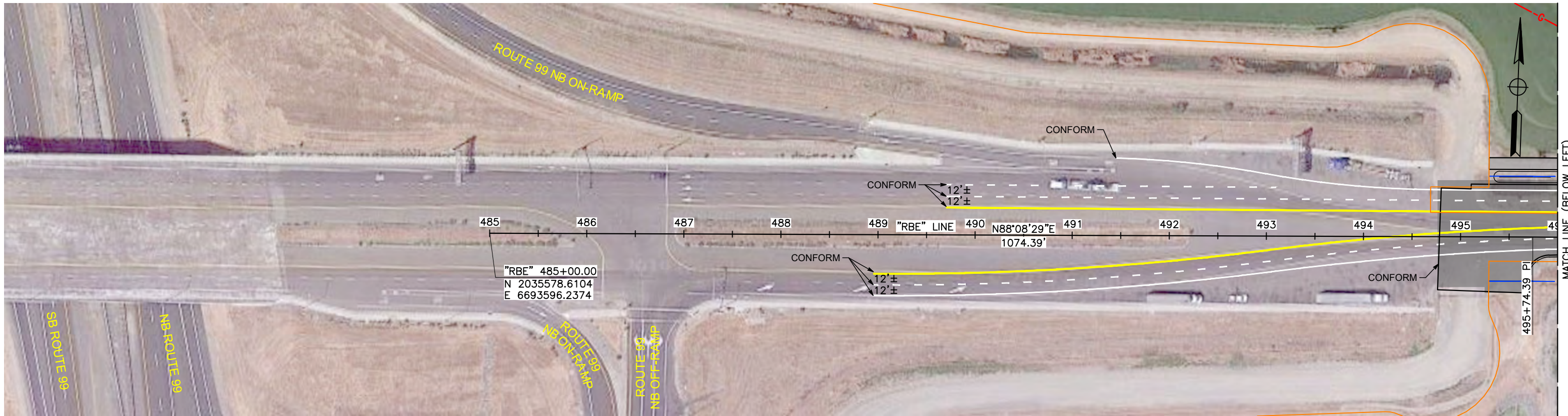


**BASELINE ROAD - TYPICAL SECTION (INTERIM)**  
**FIDDYMENT ROAD / WALERGA ROAD TO BRADY LANE**

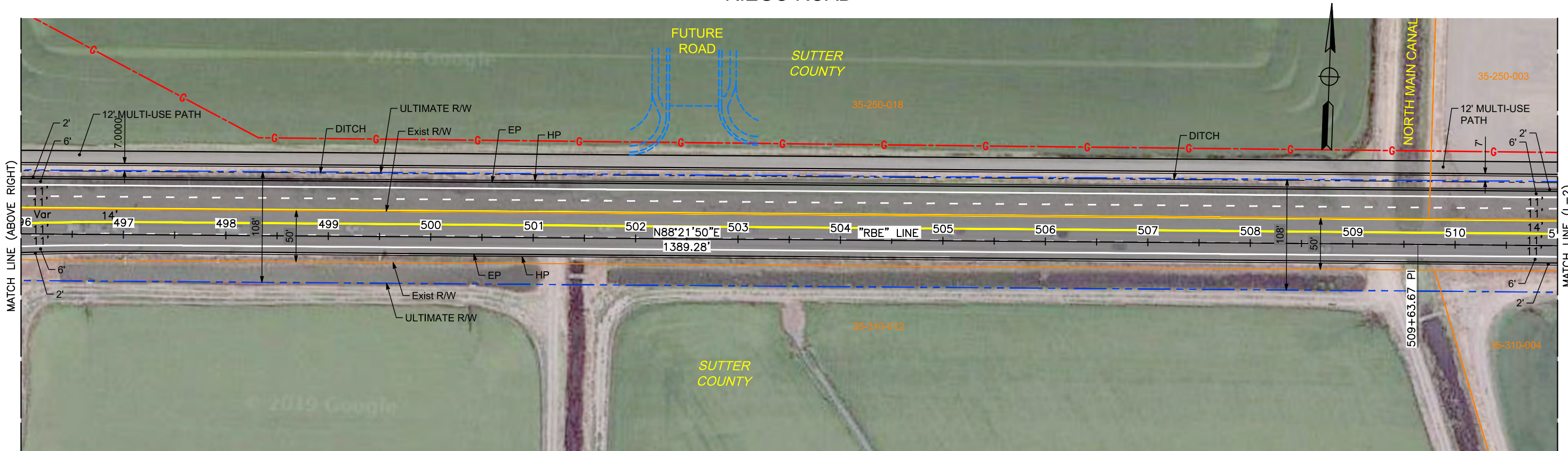
LAYOUT SHEETS 17 TO 21  
 NO SCALE

**TYPICAL SECTION #7**  
**ALTERNATIVE 2**





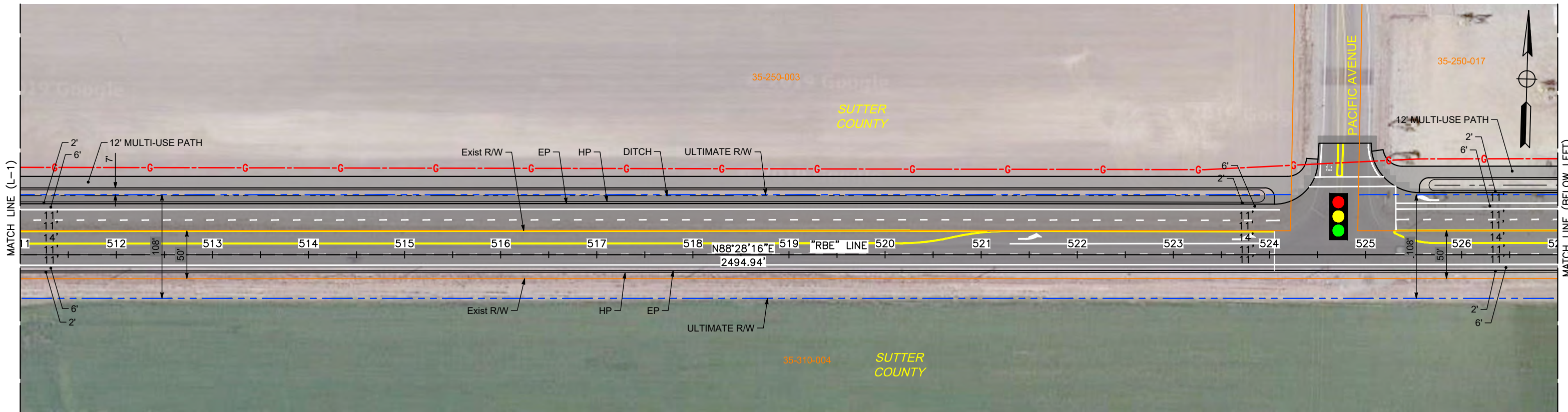
RIEGO ROAD



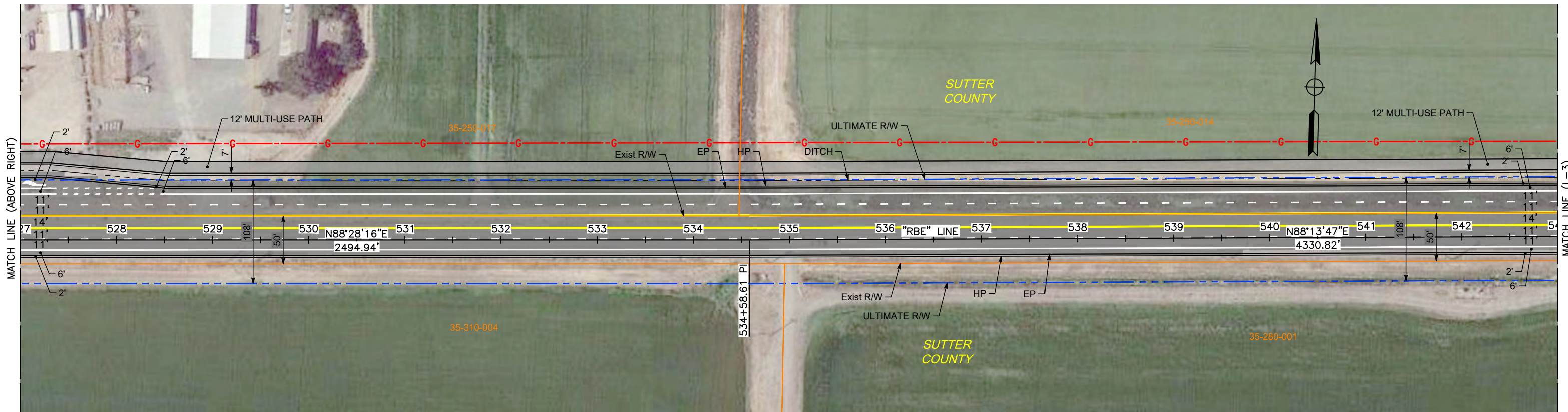
RIEGO ROAD

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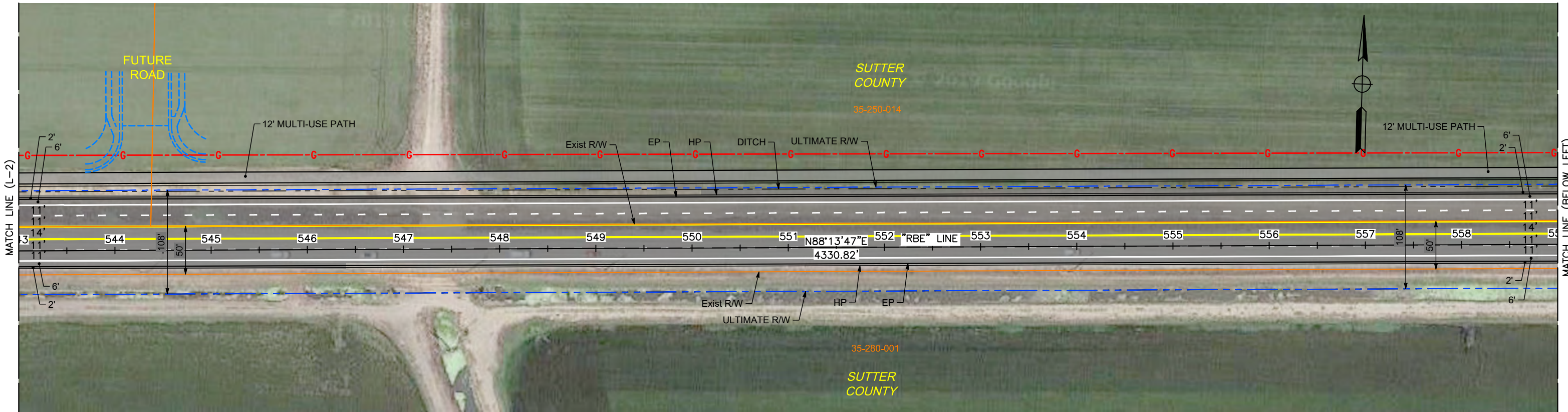
RIEGO ROAD



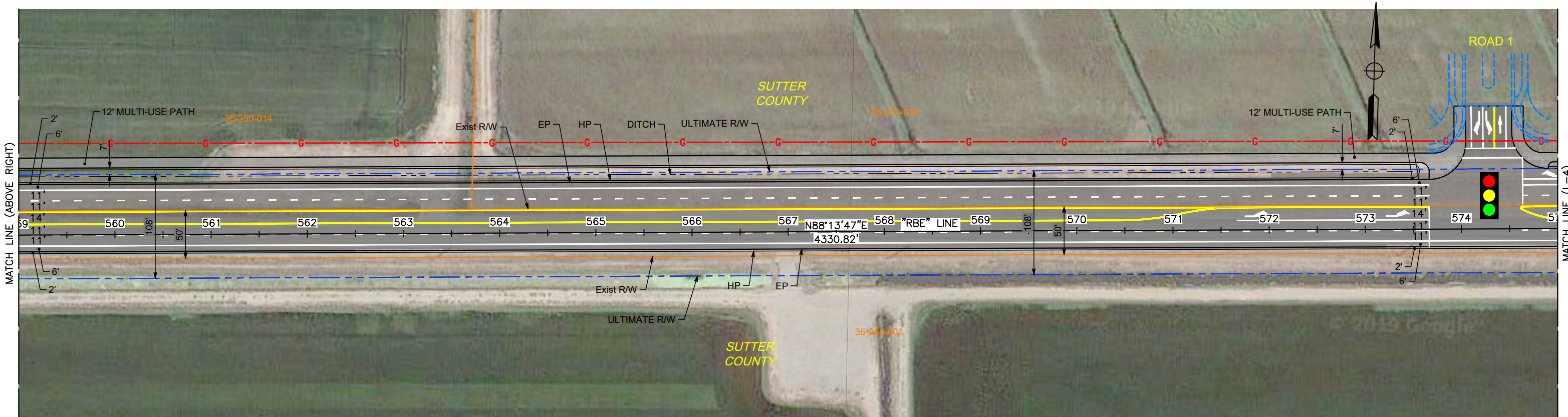
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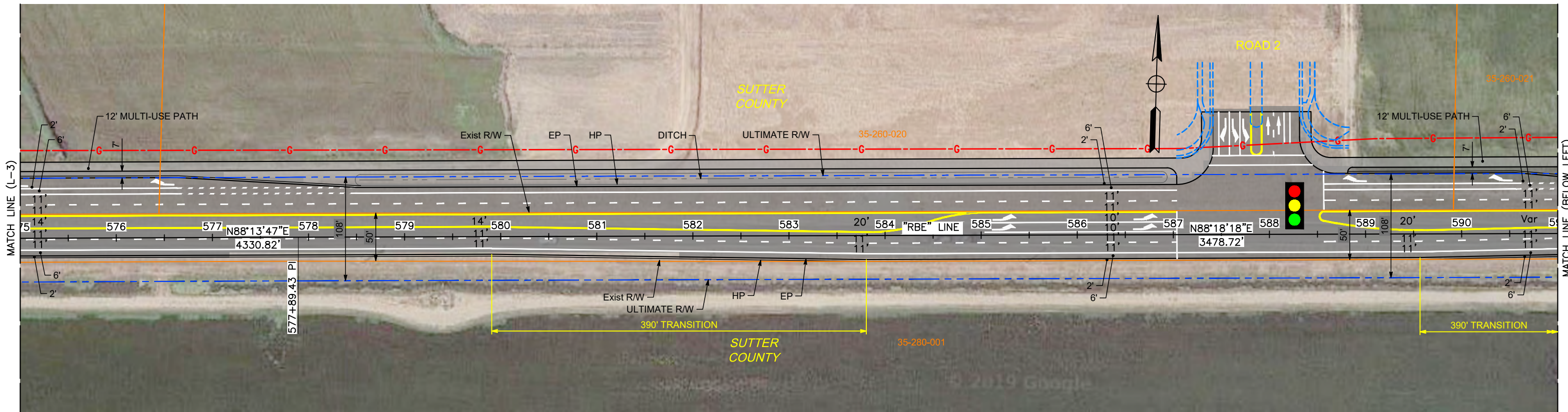


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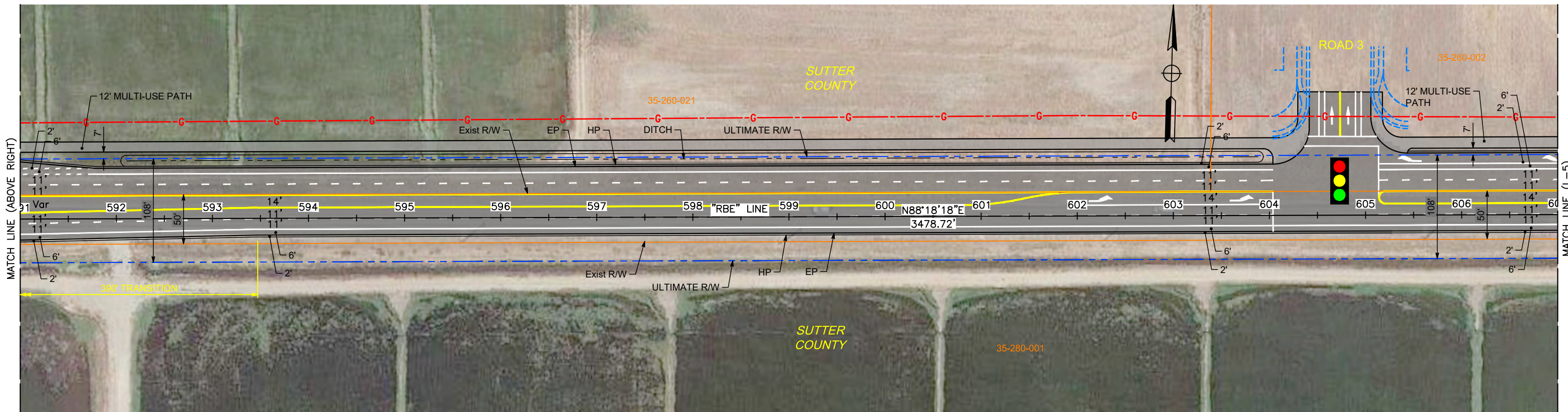


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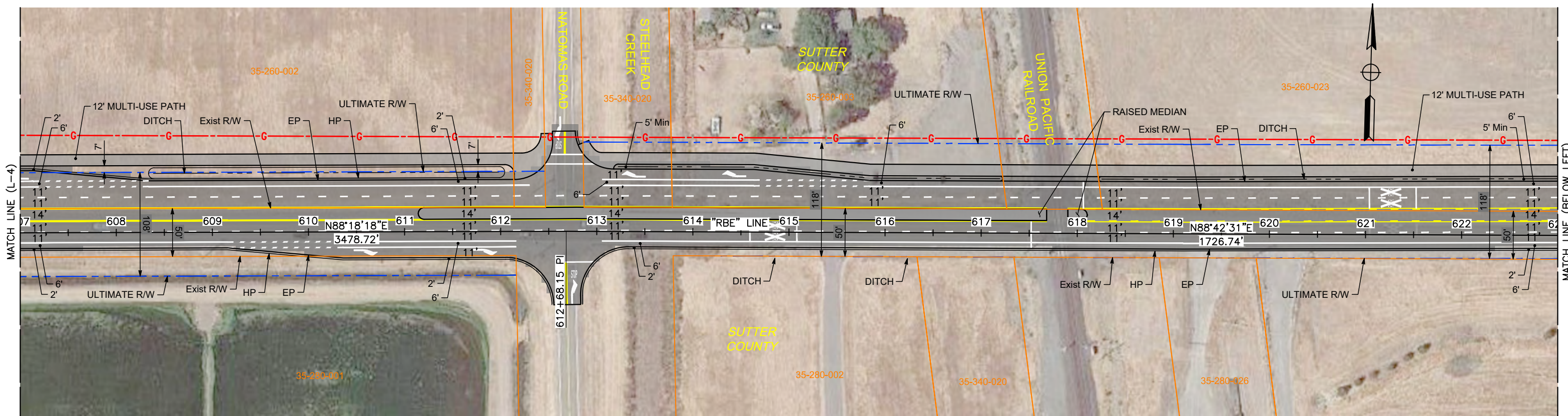


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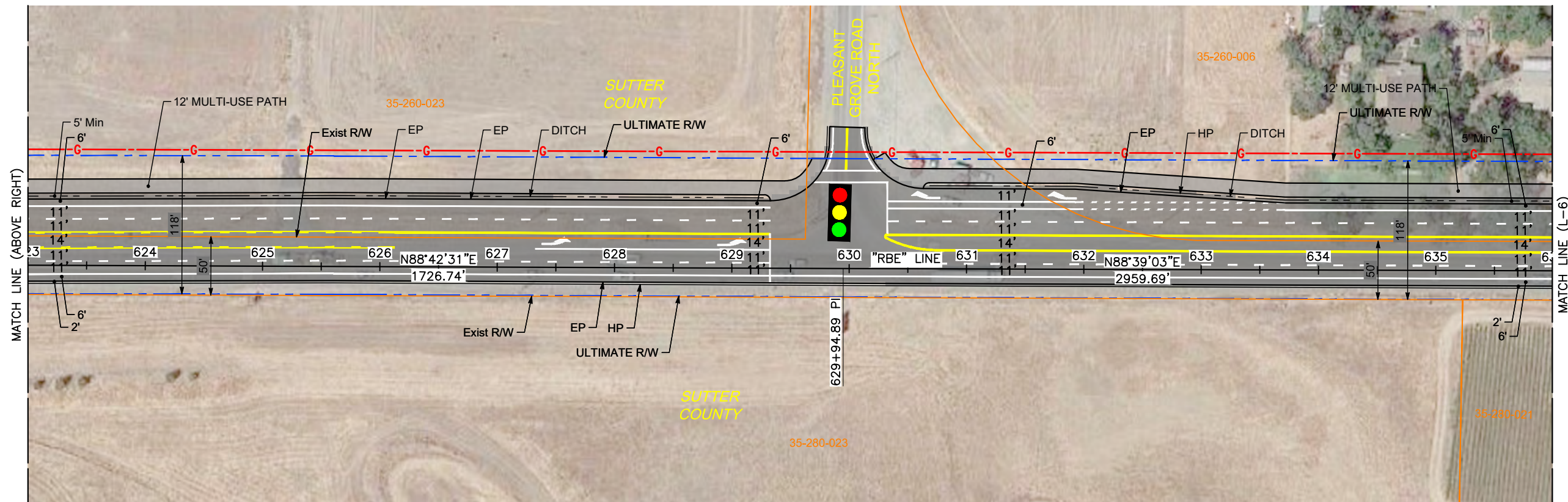


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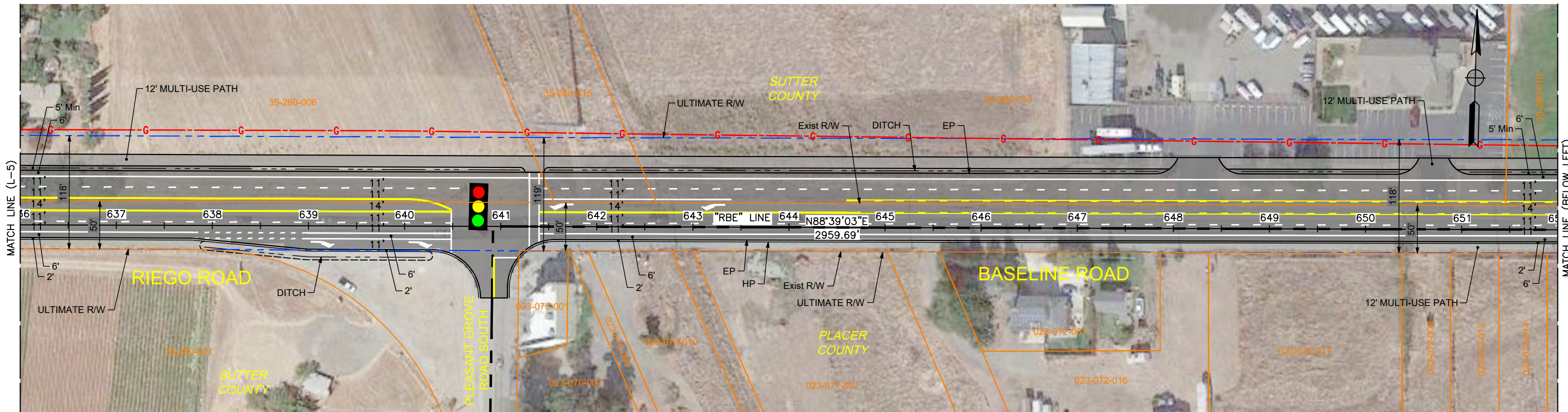


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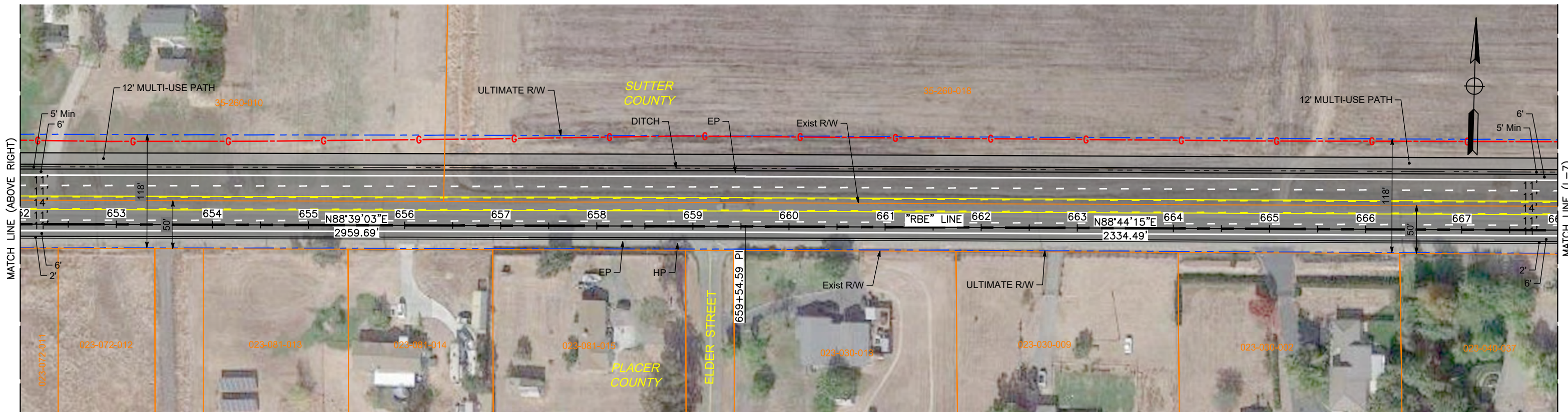


RIEGO ROAD



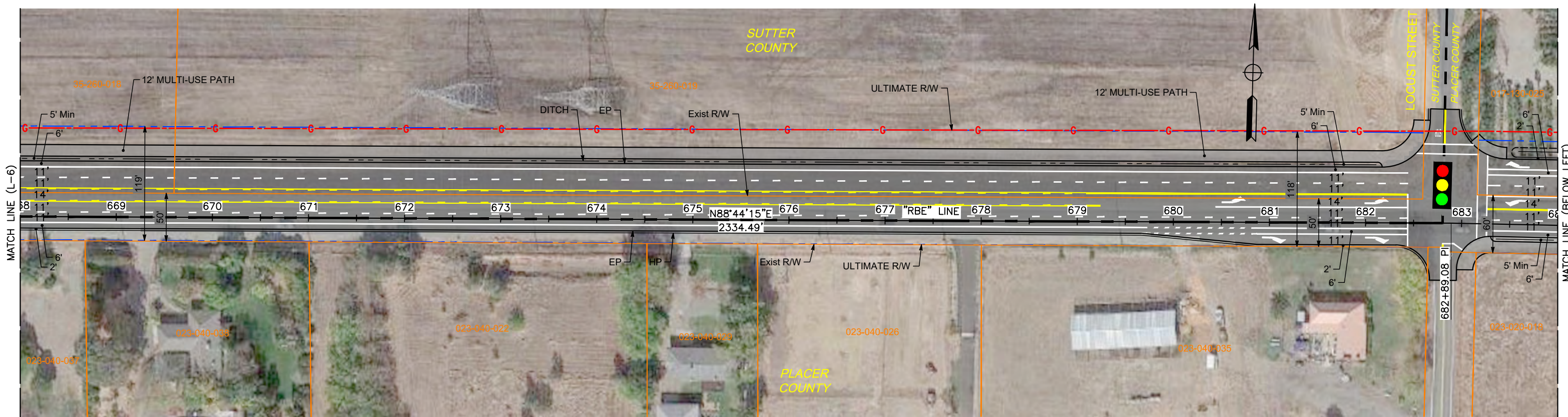


RIEGO ROAD / BASELINE ROAD

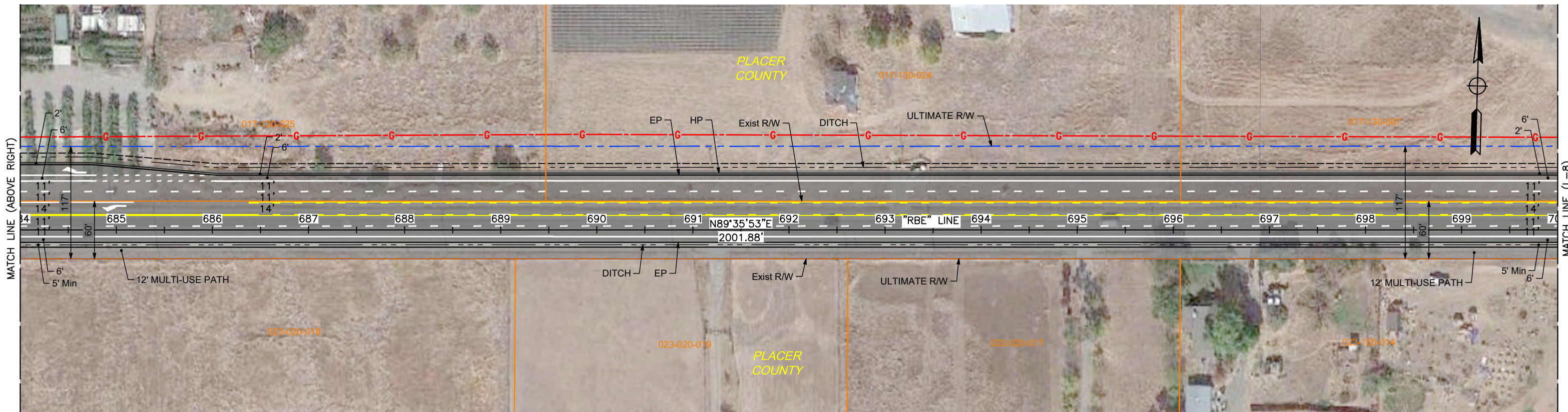


BASELINE ROAD





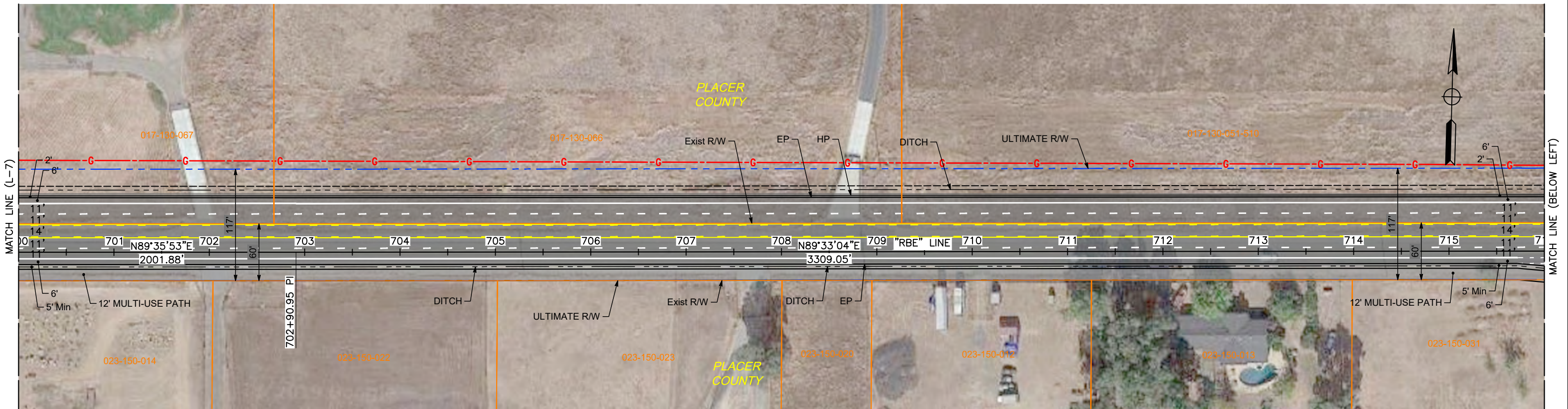
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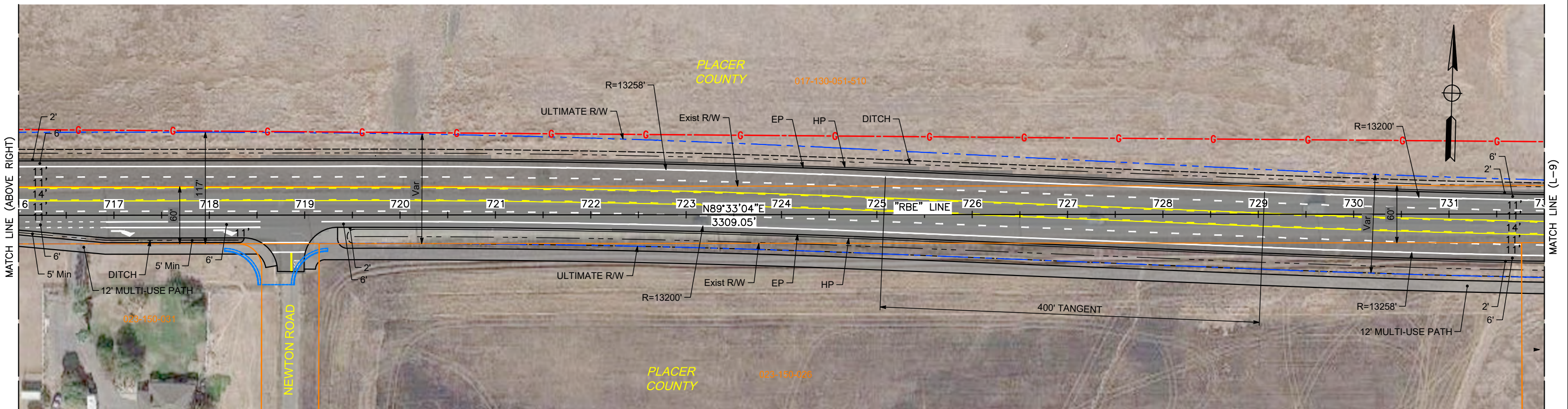
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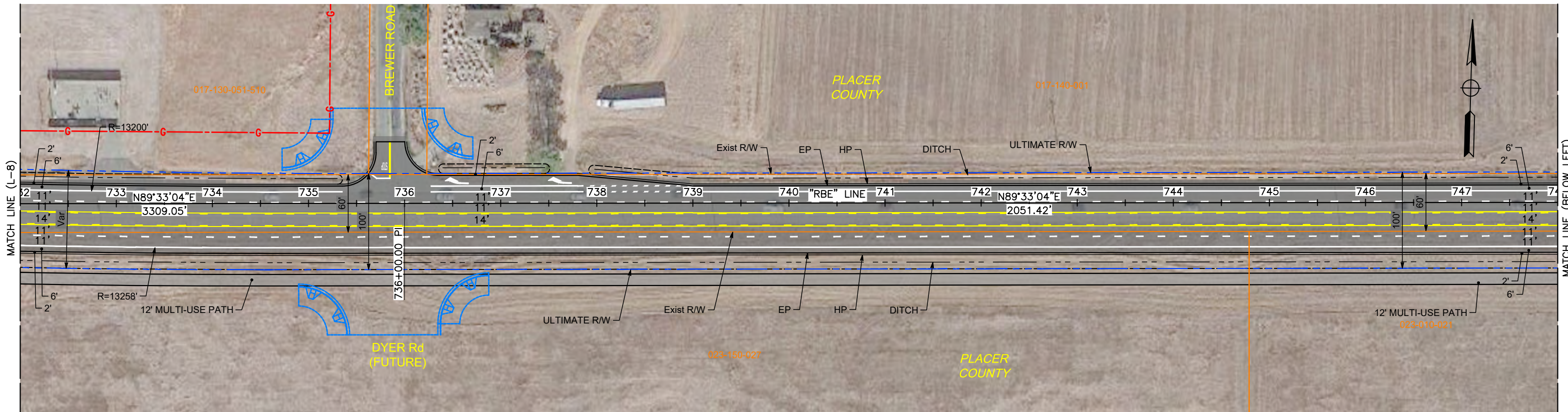


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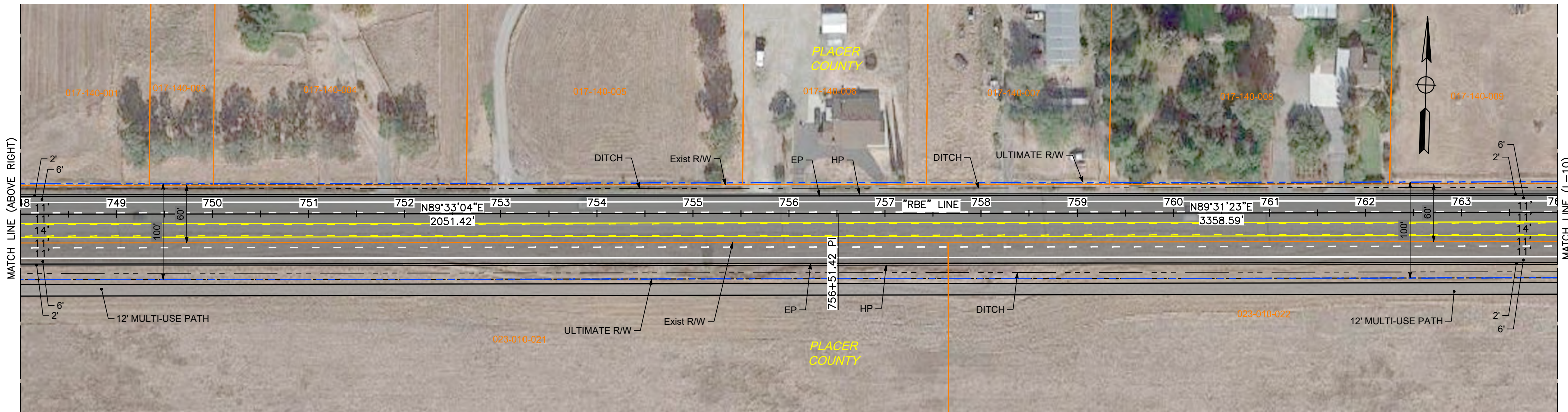


BASELINE ROAD





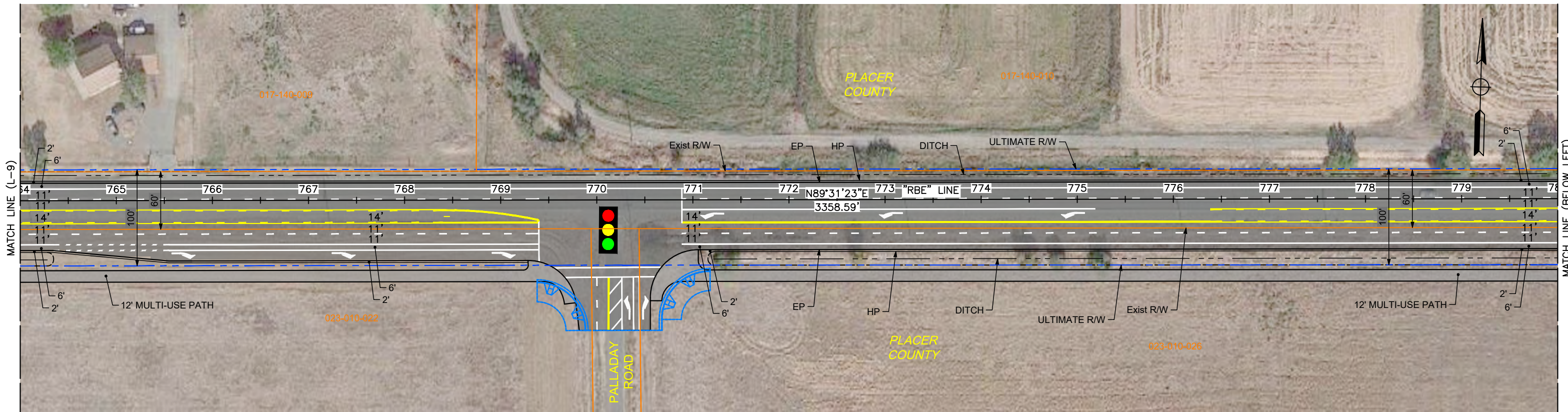
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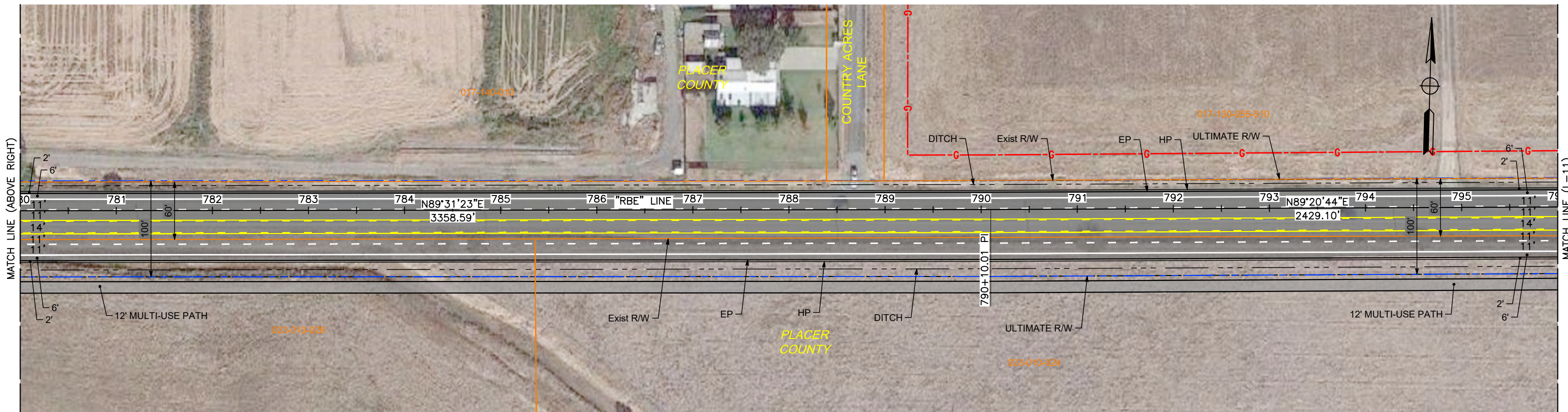
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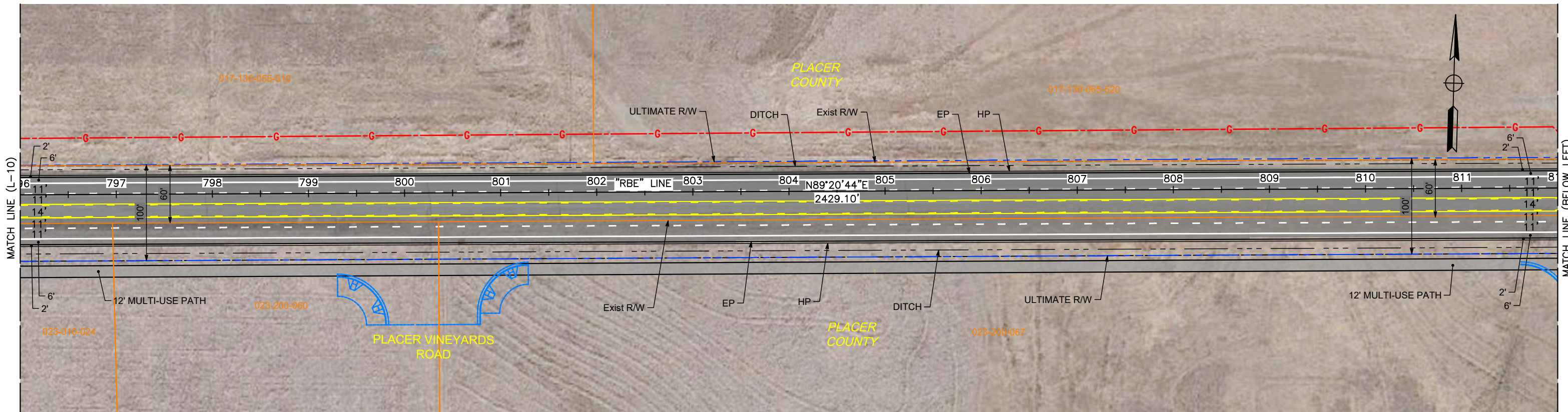
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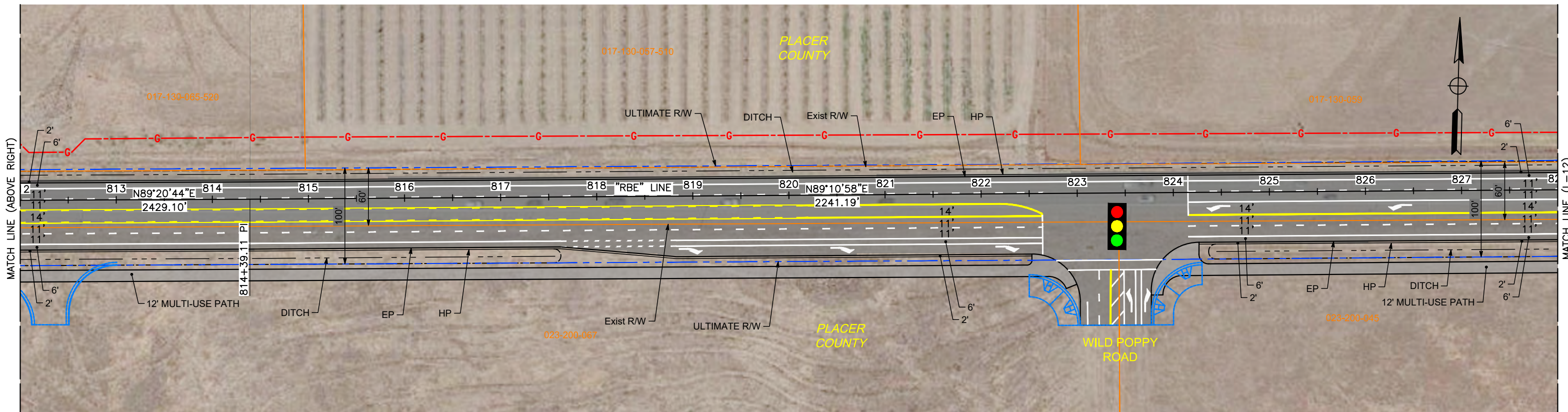
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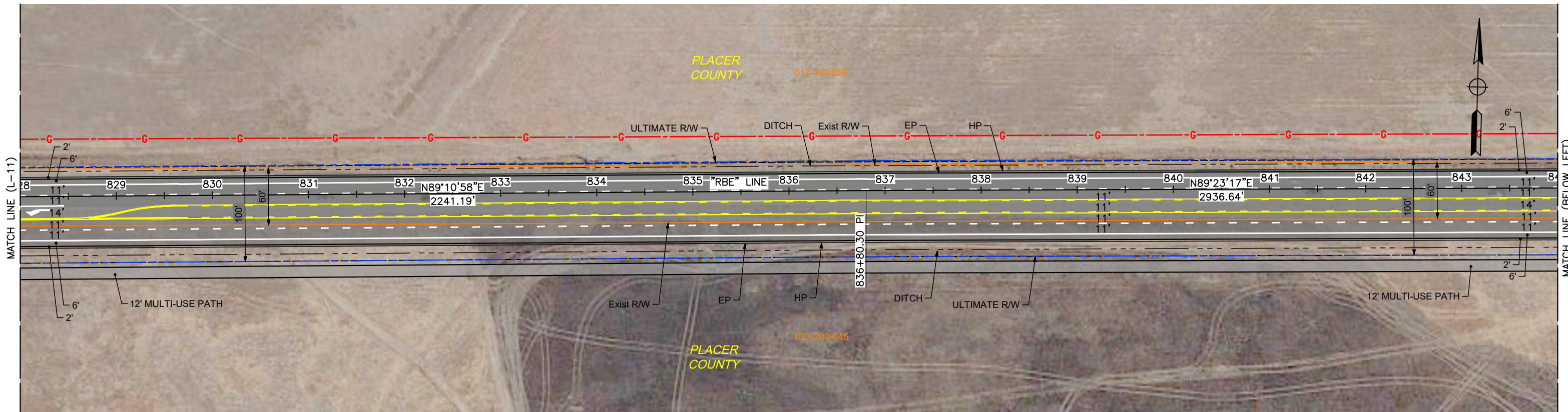
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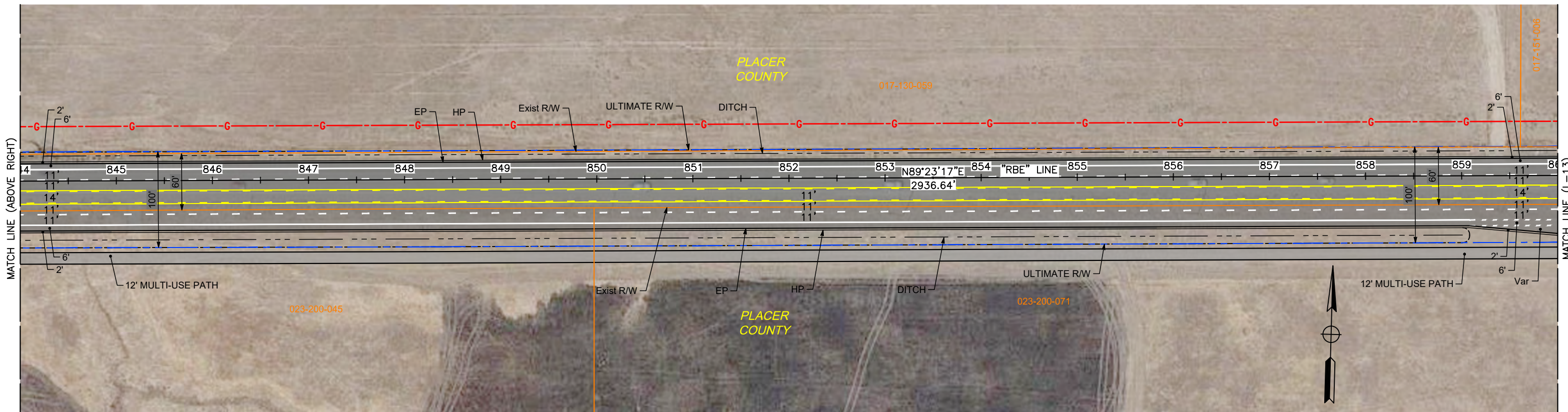
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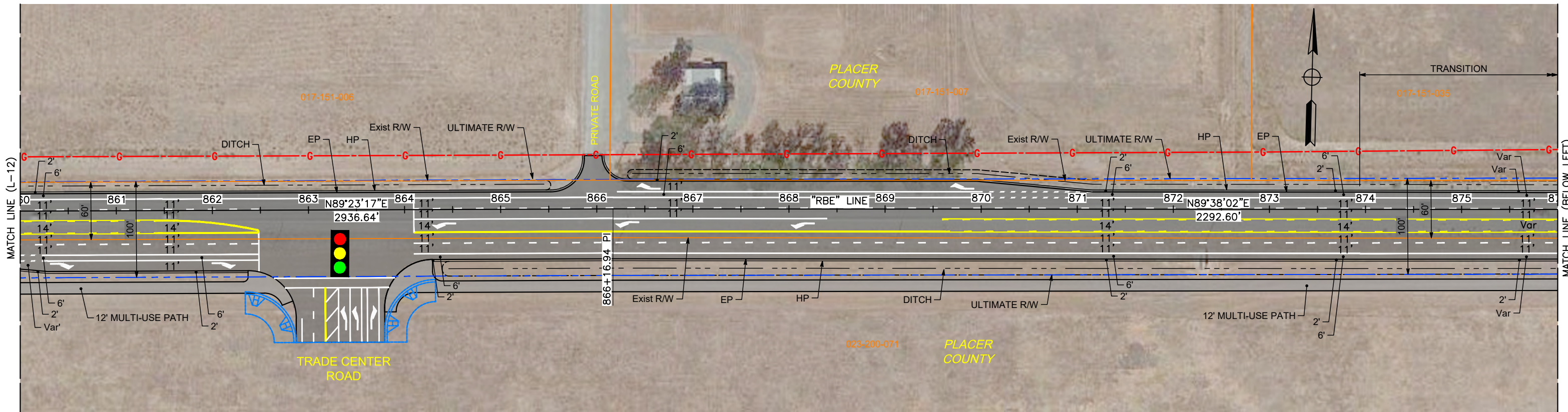
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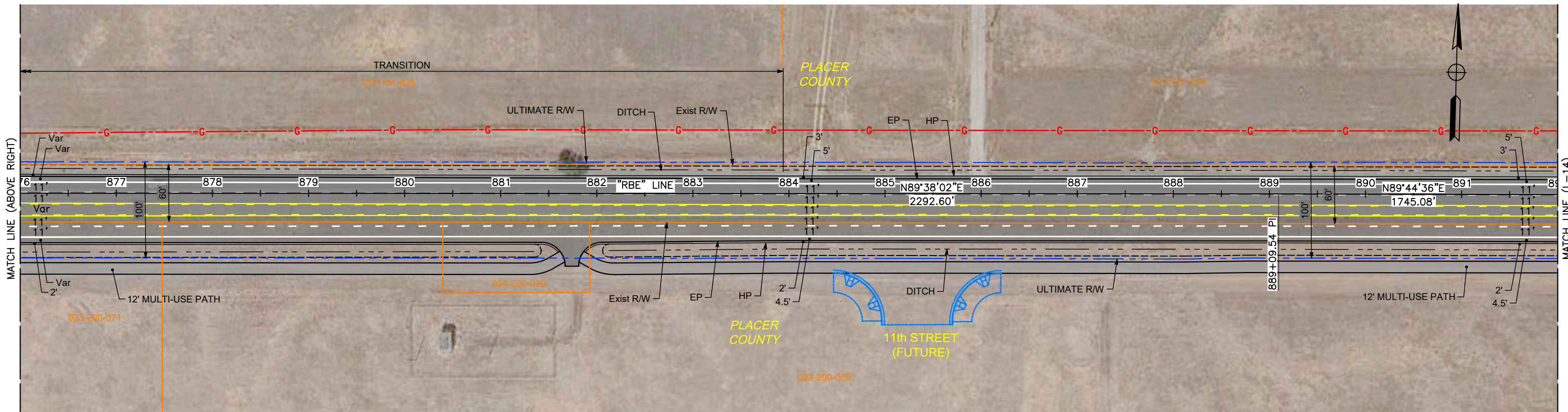
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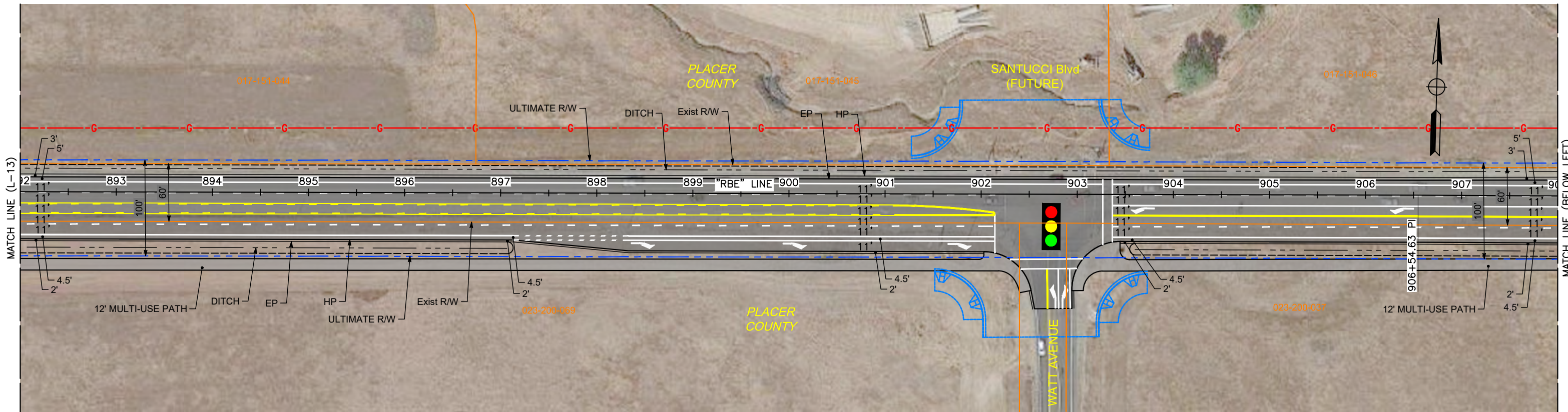
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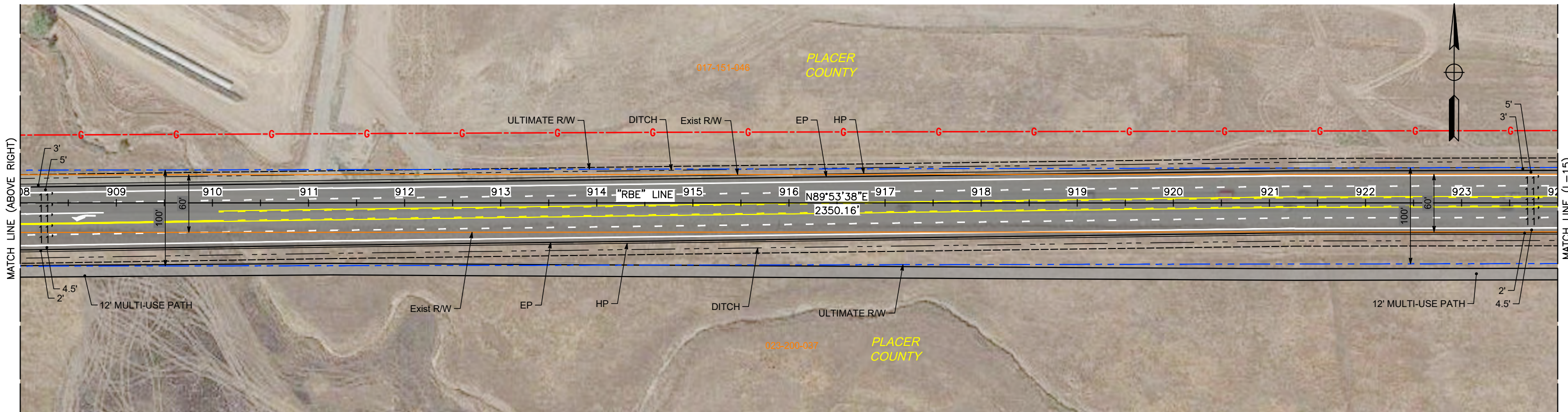
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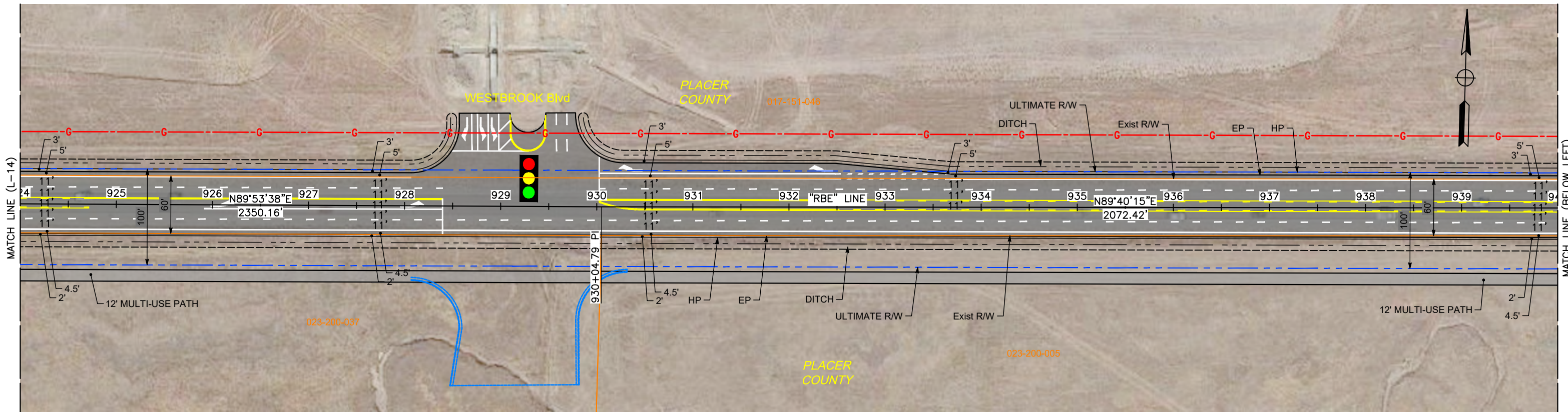
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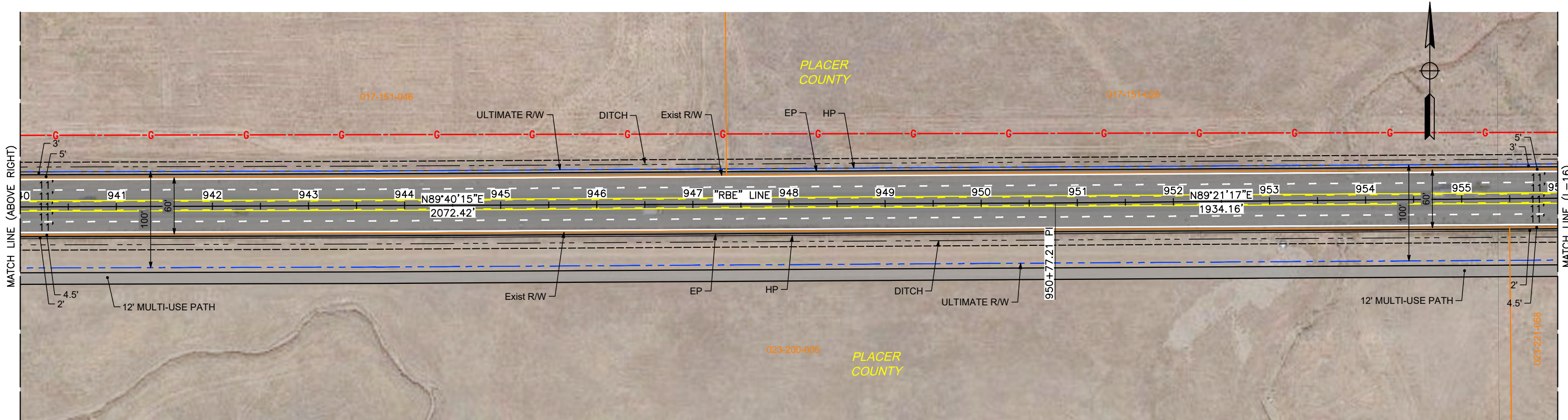
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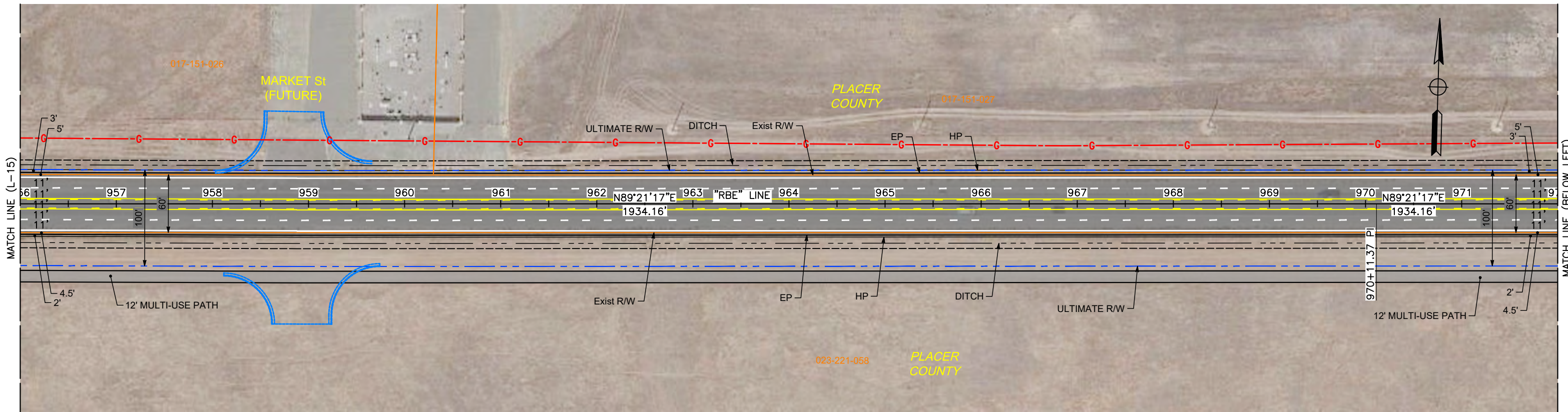
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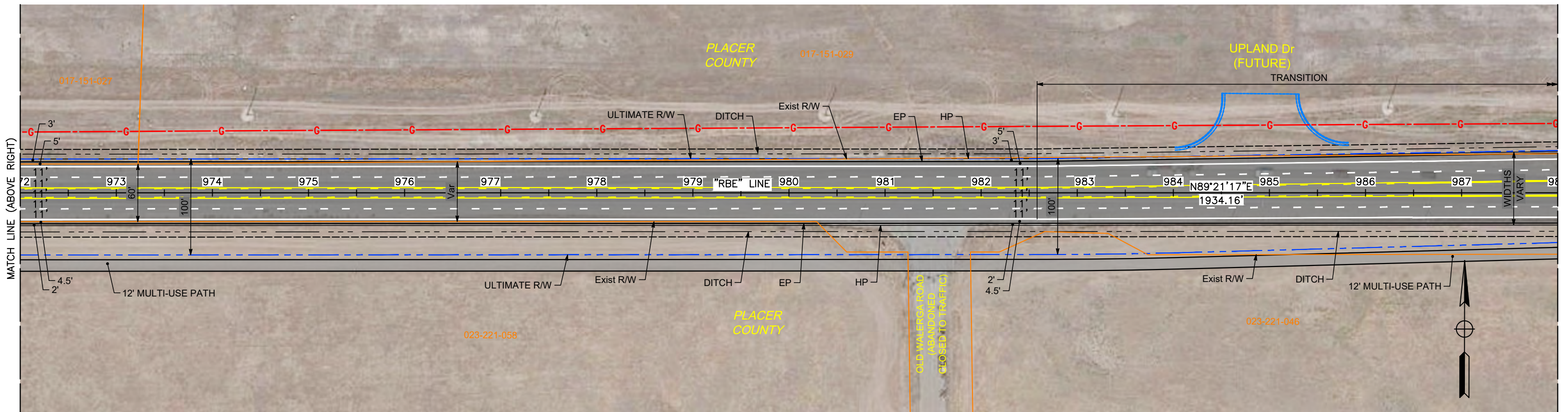
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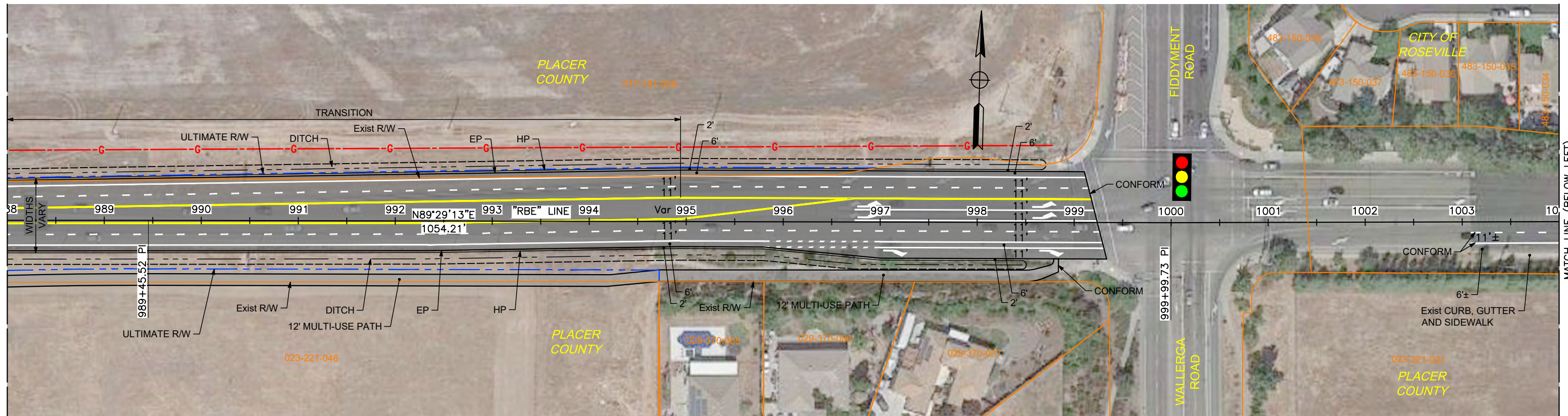
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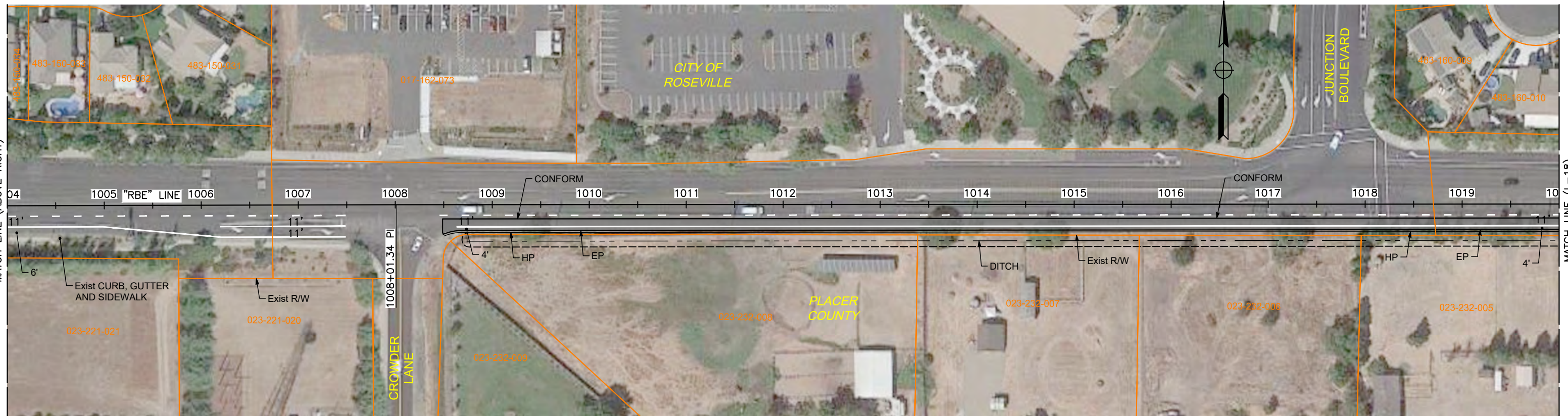
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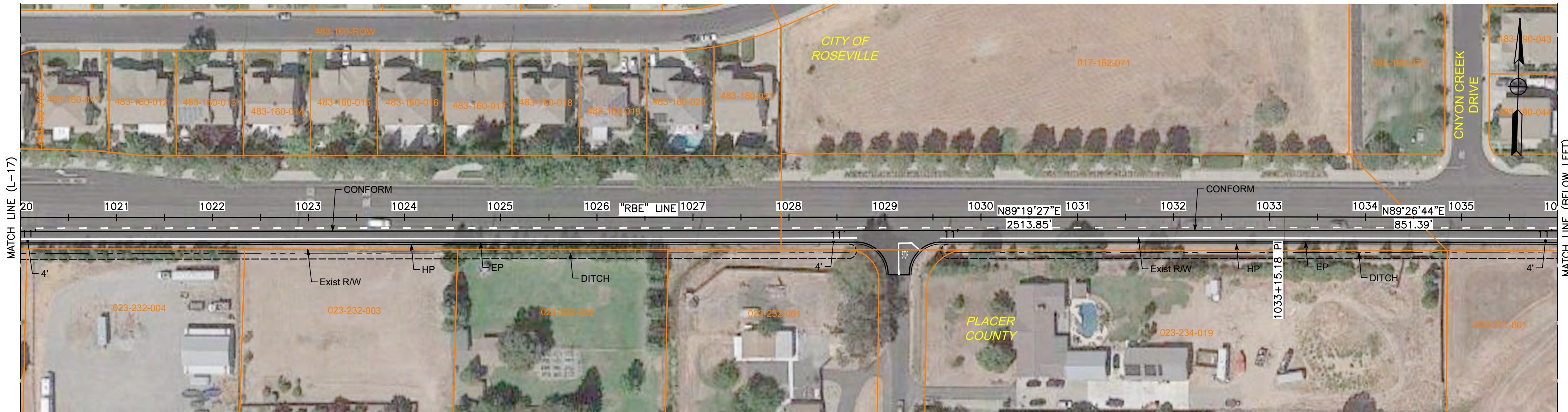
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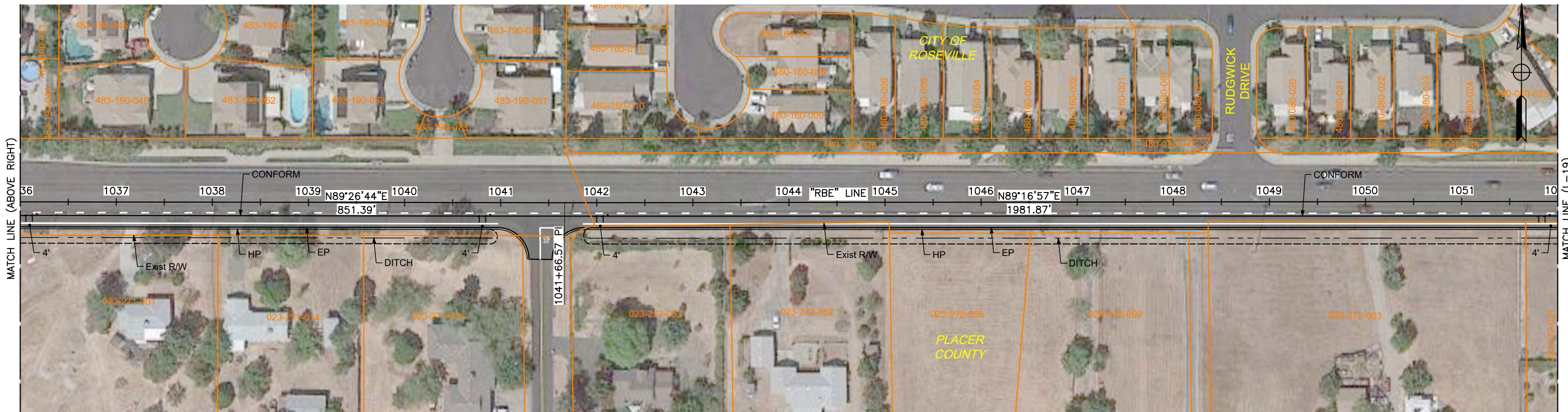
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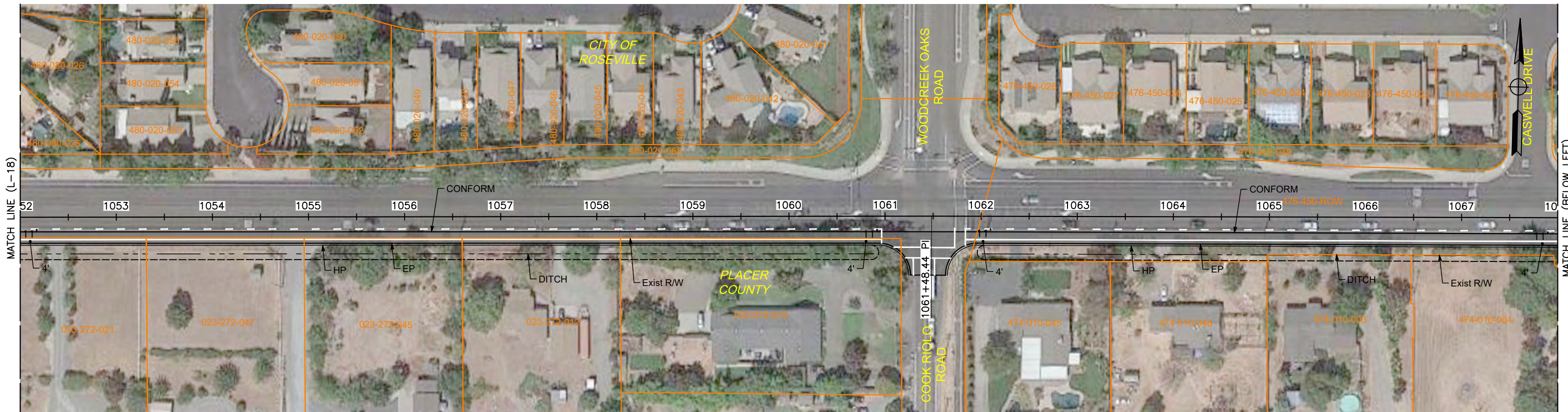
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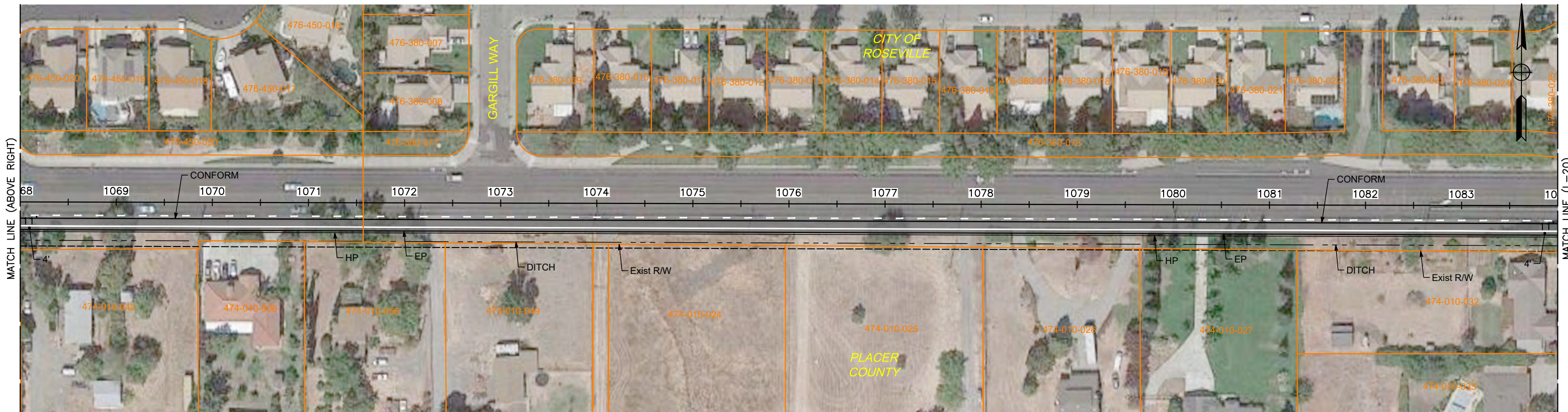
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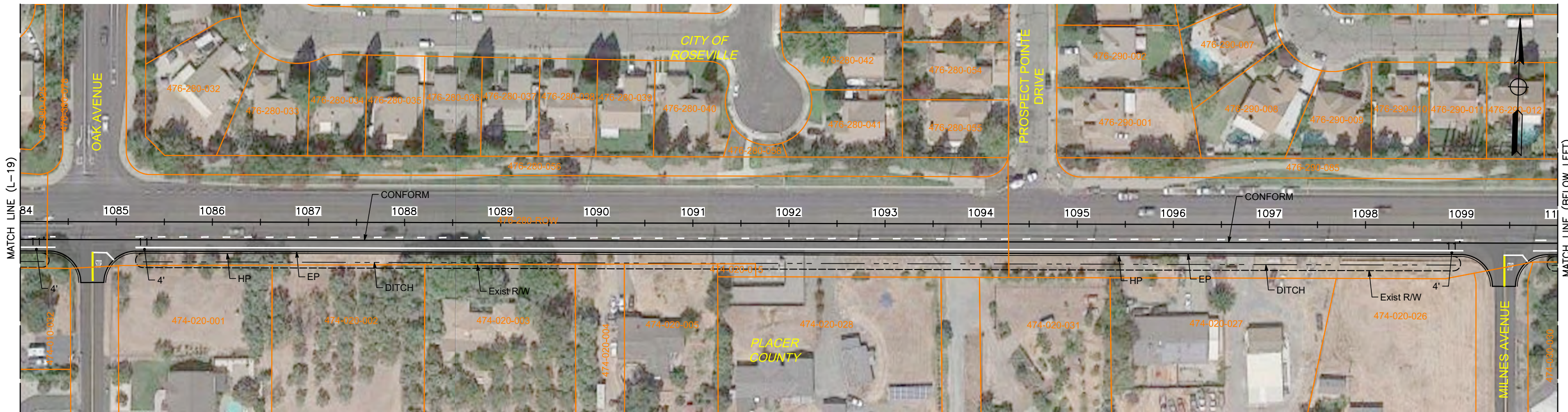
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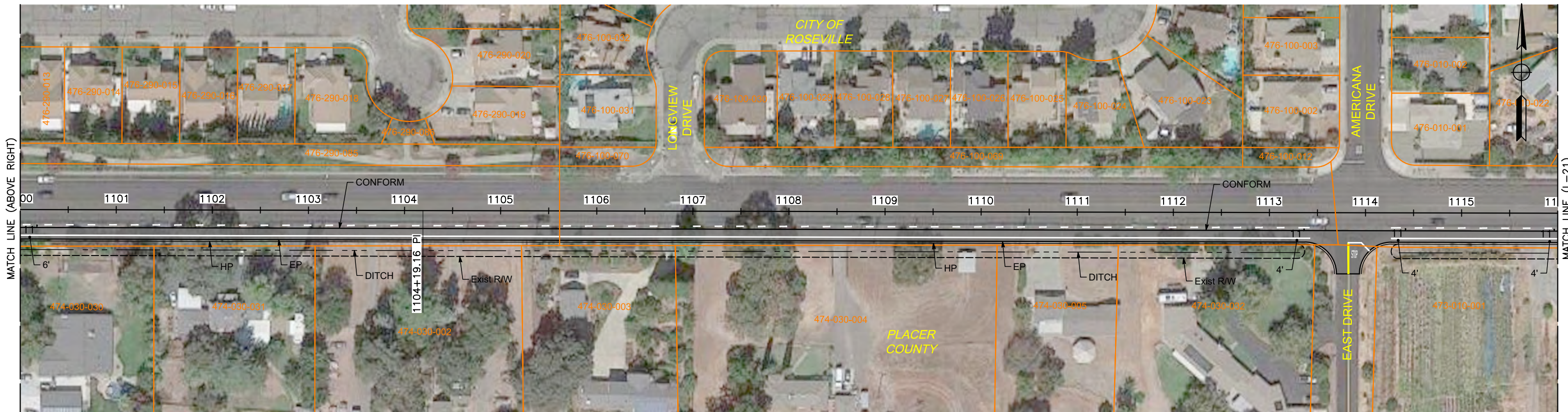
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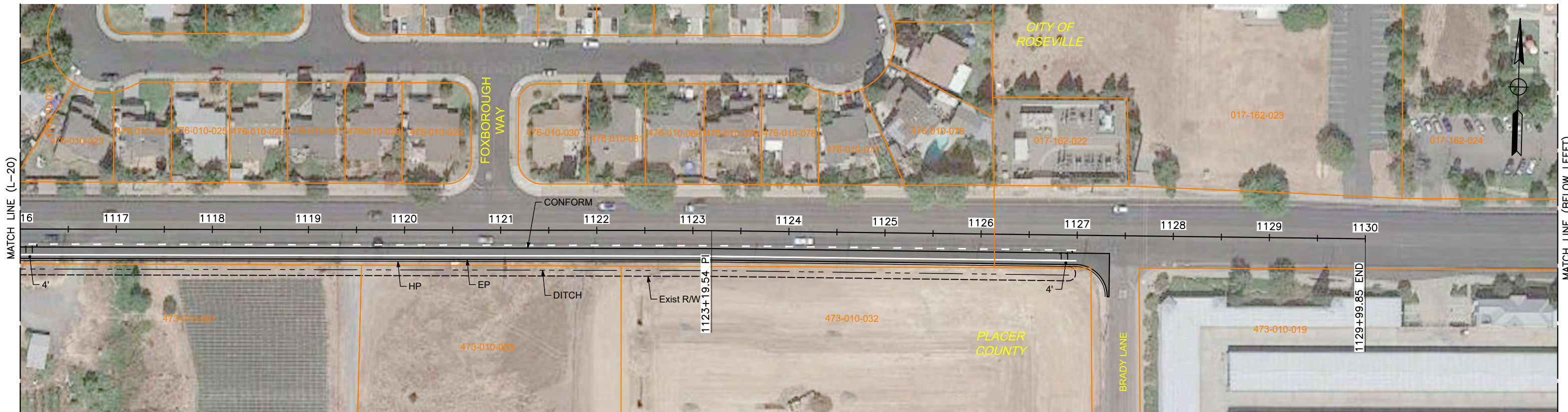
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BASELINE ROAD

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BASELINE ROAD



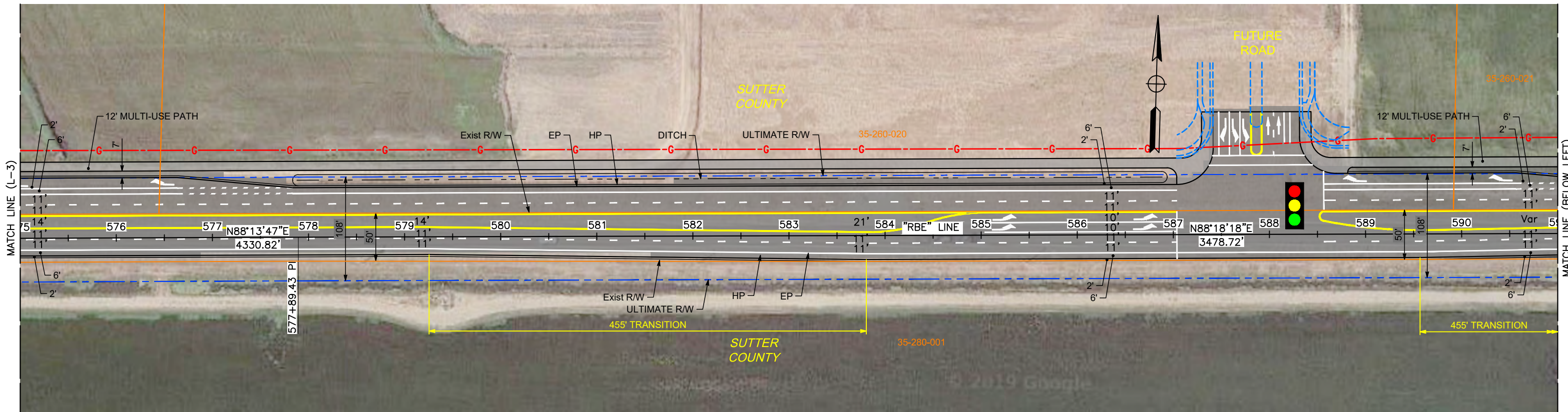
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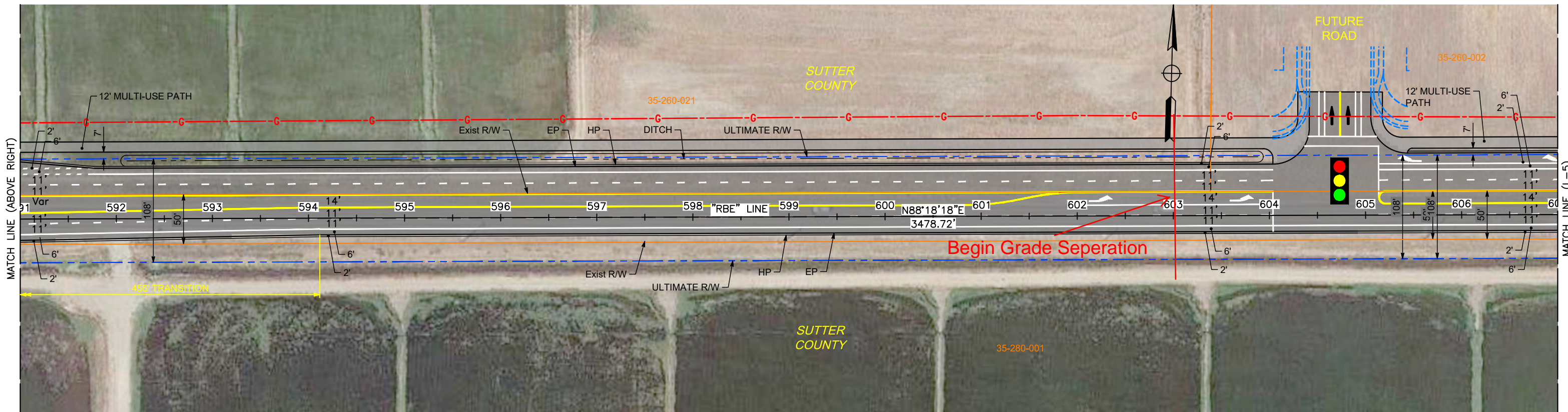


# GRADE SEPARATION



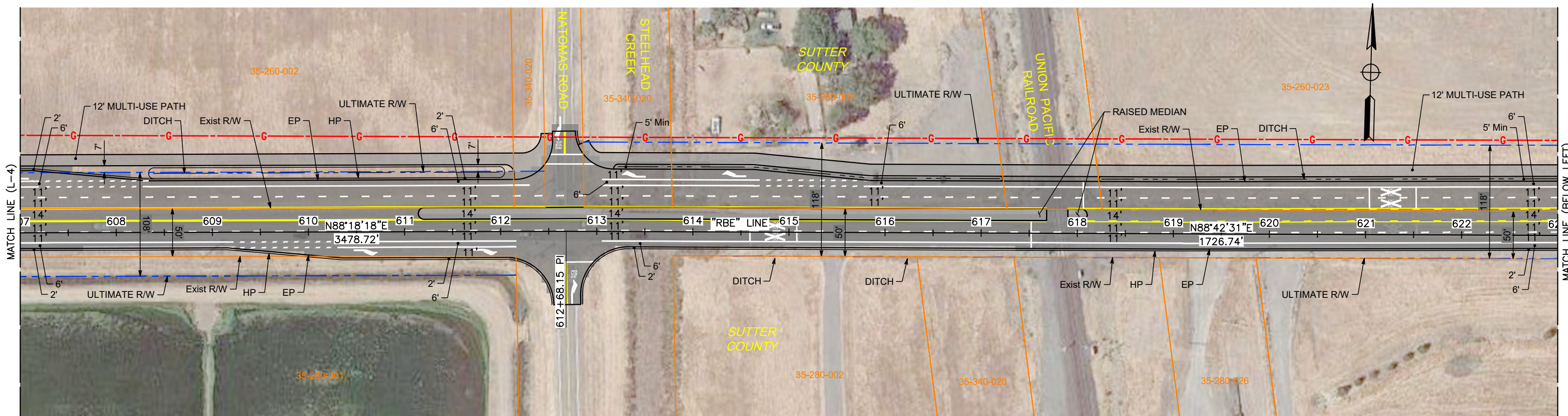


RIEGO ROAD

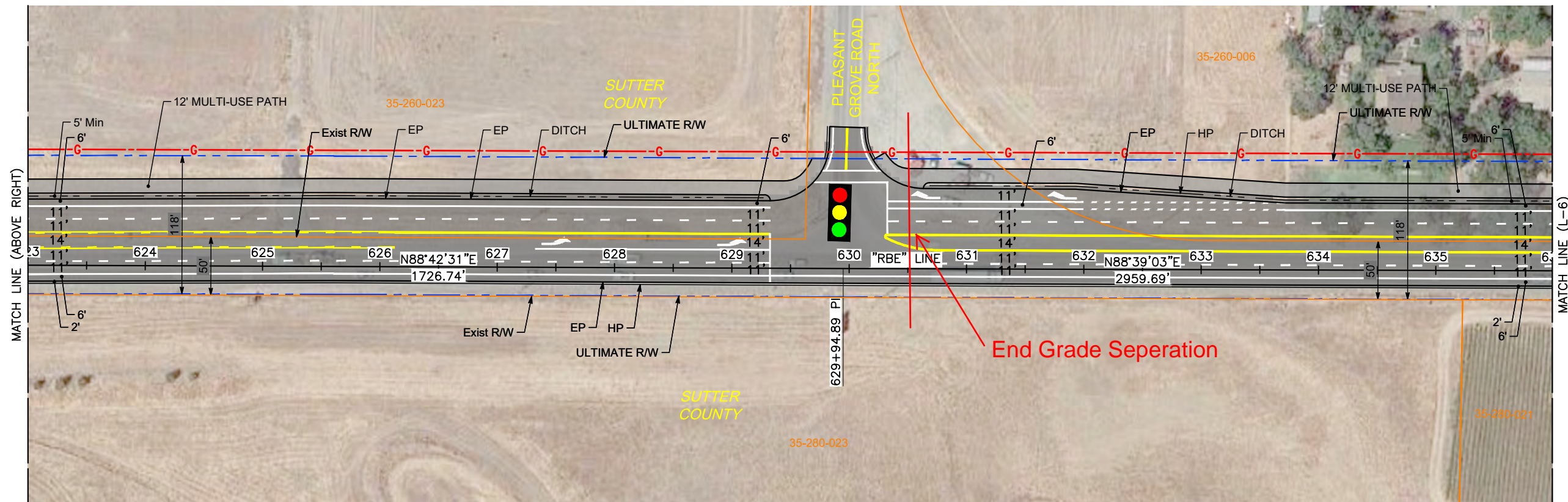


RIEGO ROAD





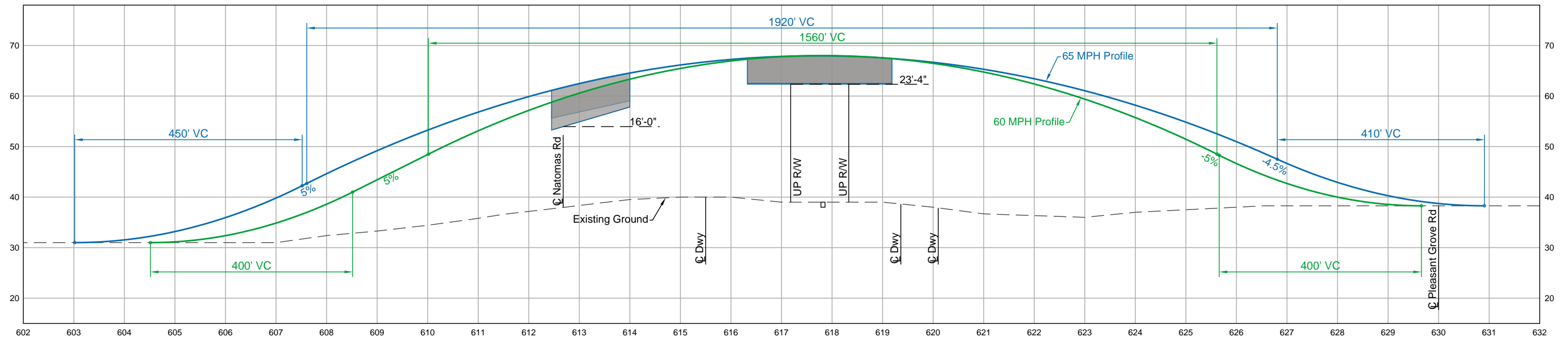
RIEGO ROAD



RIEGO ROAD

RIGHT OF WAY TAKE







ATTACHMENT C  
ENVIRONMENTAL OVERVIEW





## Memorandum

<b>To:</b>	Jose Silva, Principal Engineer, Dewberry/Drake Haglan
<b>From:</b>	Shahira Ashkar Project Manager, ICF
<b>Date:</b>	July 30, 2020
<b>Re:</b>	<b>Riego Road/Baseline Road Widening Project Study Report Equivalent</b>

## Introduction

As economic growth and planned development continue along the Riego Road/Baseline Road corridor, the once rural area has transformed over the past decade and the two-lane road is experiencing traffic congestion; an estimated 20,000 cars per day travel on the road, and as more home construction occurs, the number is expected to double to 40,000. In response to this growth, Placer County Transportation Agency (PCTPA), in conjunction with Placer County, the City of Roseville, and Sutter County is proposing the Riego Road/Baseline Road Widening Project in Placer and Sutter Counties. PCTPA has coordinated with Sutter and Placer Counties and the City of Roseville for various specific plans along the roadway including Sutter Pointe, Placer Vineyards, and Sierra Vista Specific Plans to identify plans to widen the roadway and address existing congestion and accommodate planned development.

Specifically, the project entails widening Riego Road/Baseline Road from two to four lanes (i.e., the interim condition) for approximately 12 miles from State Route (SR) 99/70 in Sutter County to Brady Lane in the City of Roseville (Figure 1). The widening would accommodate vehicular, transit, bicycle, and pedestrian improvements, as well as landscaping, consistent with the circulation elements for arterial roadways identified in the applicable specific plans. Riego Road/Baseline Road is currently being widened on the north side of the road east of Watt Avenue to support the development of the Sierra Vista Specific Plan. When additional funding is available, the corridor will be widened to six lanes (i.e., the ultimate condition) to accommodate the planned traffic growth.

This Project Study Report Equivalent (PSR Equivalent) provides a high-level analysis of potential environmental resource issues and identify likely permits associated with the design concept and scope of the most likely project alternatives, and to plan for future studies under subsequent phases of project development.



## Project Location

The project begins in Sutter County from the SR 99/70 and Riego Road interchange and ends in the City of Roseville at Brady Lane (Figure 1). It traverses three local specific plans within three separate jurisdictions: Sutter Pointe Specific Plan in Sutter County, Placer Vineyards Specific Plan in unincorporated Placer County, and Sierra Vista Specific Plan in the City of Roseville.

## Purpose and Need

The purpose of the project is to accomplish the following:

- Provide interim improvements to increase the roadway capacity to meet the design year (2040) volume demands from planned growth as anticipated in the General Plans and refined in the three adjacent specific plans
- Provide acceptable level of service for design year (i.e., 2040) traffic operations
- Improve regional mobility consistent with the goals of PCTPA
- Provide a cost-effective solution by maximizing the use of required developer dedicated right of way and improvements

PCTPA initiated the project in response to the need for coordinated roadway improvements to accommodate additional vehicular volumes based on the future development in the corridor.

## Project Description

The project includes widening of Riego Road/Baseline Road to four lanes from SR 99/70 to Brady Lane (approximately 12 miles). The improvements will include vehicular, transit, bike, and pedestrian infrastructure and the addition of landscaping.

## Alternatives

This PSR Equivalent evaluates two build alternatives and a No Build Alternative. The two build alternatives involve a four-lane at grade separation at the Union Pacific Railroad (UPRR) tracks and Steelhead Creek (also referred to as the Natomas East Main Drain) in unincorporated Placer County, and a four-lane at grade widening at the closure of one or more at-grade UPRR crossings north of the project.

### No Build Alternative

Under the No Build Alternative Riego Road/Baseline Road would not be widened and additional capacity or multi-modal infrastructure would not be provided.

This alternative would not meet the purpose and need of the project.



## Alternative 1

Alternative 1 would widen Riego Road/Baseline Road from two to four 11-foot lanes with a 14-foot wide two-way left turn lane, 6-foot bike lanes and roadside ditches on both sides between SR 99/70 and Walerga Road. Between Walerga Road and Brady Lane, the roadway would conform to the existing facility and a small amount of widening would occur to the south. The existing UPRR railroad at-grade crossing and existing bridge over Steelhead Creek would both be widened to accommodate the new roadway.

Riego Road would be widened to the north from SR 99/70, across the Sutter Pointe Specific Plan area and the railroad tracks, to Newton Road (i.e., Alternative 1, Typical Section 1, RRs 1, 2 and 3). The alignment transitions from Newton Road to Brewer Road with widening on both the north and south sides (i.e., Alternative 1, Typical Section TR-1). From Brewer Road to Sierra Vista, the widening is to the south of the existing road (i.e., Alternative 1, Typical Section 4). The road widening shifts back to widening on both the north and south sides of the existing street along both frontages of the Placer Vineyards Specific Plan area and the Sierra Vista Specific Plan area (i.e., Alternative 1, Typical Section 5) to Fiddymment Road/Walerga Road. From Fiddymment Road/Walerga Road to Brady Road, the roadway transitions to conform to the existing curb and gutter on the north side and widens to the south side (i.e., Alternative 1, Typical Section 6).

## Alternative 2

Alternative 2 would be the same as Alternative 1, but would also include a 12-foot multi-use path. The multi-use path would run along the north side of the road from SR 99/70 to Locust Road (i.e., Alternative 2, Typical Sections 1, RRs 2, 2 and 3). At Locust Road, the multi-use path would cross over to the south side and continue to Fiddymment Road/Walerga Road (i.e., Alternative 2, Typical Sections 4 and 5). At Fiddymment Road/Walerga Road, it would cross back to the north side of the road to conform to the existing 8-foot meandering multi-use path (i.e., Alternative 2, Typical Section 6).

## Permits and Approvals

Both build alternatives could require a variety of potential local, state, and federal permits and authorizations. Except for the local permits and authorizations, the state and federal permits would be generally the same for both alternatives. Table 1 lists the various permits and authorizations that may be triggered by the proposed project, identifies technical studies or other requirements of the various permit application submittals (if known), and provides general timeframes for obtaining permits and authorizations. The permits and authorizations would be obtained for the selected alternative, and the process would ideally be initiated concurrently with preparation of the environmental document if construction is planned for within 2 years of obtaining the permits.

Significant portions of the project occur within previously permitted specific plan development areas; therefore, they may not require additional permits and approvals. These existing permit/authorizations may need to be obtained via coordination with local agencies and a Freedom of Information Act (FOIA) request to the U.S. Army Corps of Engineers.



**Table 1. Permits and Approvals**

Permit/Agreement	Timing
California Fish and Game Code—Lake or Streambed Alteration Agreement	Prior to construction
Clean Water Act Section 401—Water Quality Certification	Prior to construction
Clean Water Act Section 402—NPDES General Permit	Prior to construction
Clean Water Act Section 404—NWP Authorization(s) or Individual Permit	Prior to construction
Section 14 of the Rivers and Harbors Act—Title 33 USC Section 408 Authorization	Prior to construction
Federal Endangered Species Act—Biological Opinion(s)	Prior to federal approval
California Endangered Species Act—2081 Agreement	Prior to construction
National Historic Preservation Act Section 106—State Historic Preservation Office Concurrence	Prior to DED circulation

NPDES = National Pollutant Discharge; NWP = nationwide permit; USC = United States Code; DED = Draft Environmental Document

## Previous Studies and Sources of Information

Most of the project area has been previously evaluated and permitted as part of three specific plan areas and a recently constructed utility project along the Riego/Baseline Road corridor (Figure 2). The Curry Creek Community Plan is shown in Figure 2; however, this plan has not yet been completed and no studies have taken place to date. It is anticipated that the specific plans project environmental documents and associated permits addressed road widening activities. PCTPA could rely on the technical studies, potential effects, and mitigation measures identified in the environmental documents. If these previously prepared environmental documents do not address the road widening, setting and known resources can be used for analysis of impacts related to this project. Coordination with the City of Roseville, Placer County, and Sutter County will be necessary to discuss road widening activities and obtain technical studies and other information. In addition, a FOIA request to the U.S. Army Corps of Engineers would be an important step to obtain additional permitting information, including Aquatic Resource Delineation reports, Biological Assessments, Individual Permits (or Nationwide permit authorizations), Biological Opinions, and mitigation agreements.

There are disjunct, undeveloped parcels along Riego Road/Baseline Road where existing information does not exist or is not readily available because they occur outside specific plan areas and the utility corridor on the north side of the road. For these areas, field studies and new analyses may be necessary. These areas occur south of Riego Road between Steelhead Creek and Pleasant Grove Road South and portions of the area east of the Placer Vineyards Specific Plan Area.



**Table 2. Previously Approved Projects Located along the Riego Road/Baseline Road Corridor**

Project	Summary	Includes Riego Road/Baseline Road Widening	Status	CEQA Lead Agency
Placer Vineyards Specific Plan	Mixed-use Specific Plan; approx. 5,230 acres; build out over 20–30 years	Yes	Approved 2007; First Development Phase approved June 2017; Baseline Road widening from Walerga Road to Pleasant Grove Road included in first phase	Placer County
Sierra Vista Specific Plan	Mixed-use Specific Plan; approximately 2,064 acres; build out over 20–30 years	Yes	Adopted in May 2010; under construction; Baseline Road widening to be coordinated with Placer Vineyards.	City of Roseville
Curry Creek Community Plan	4,189-acre future project; no environmental document available	Unknown	Future	City of Roseville
Sutter Pointe Specific Plan	Mixed-use Specific Plan; 7,528 acres	Yes	Approved 2009; amendment approved 2014	Sutter County
PG&E Line 406/407 Pipeline	Natural gas pipeline; Line 407 East is on the north side of Riego Road/Baseline Road	No	Constructed	California State Lands Commission

## Constraints Analysis

This section describes the setting, evaluation methods, and findings for each of the following environmental factors.

- Land Use
- Growth
- Farmlands
- Public Services
- Utilities and Service Systems
- Traffic/Transportation
- Visual/Aesthetics
- Cultural and Tribal Resources



- Hydrology and Floodplain
- Water Quality and Stormwater Runoff
- Geology, Soils, Seismic and Topography
- Paleontology
- Hazardous Waste/Materials
- Wildfire
- Air Quality
- Noise and Vibration
- Energy and Climate Change
- Biological Environment

## Environmental Constraint Definition

For the purposes of this analysis, an *environmental constraint* is defined as a factor that either impedes or limits the potential for implementation of the project alternatives. A constraint can be specific to a particular site or area, or can be a general condition that affects the project area on a larger scale. Constraints (described below) can be grouped into three categories: resource, safety, and infrastructure.

- **Resource constraints** affect areas where significant natural or other resources are present. These include important farmlands, sensitive habitats, special-status species occurrences, and archeological/historical resources. Lands with resource constraints often have value in that they may provide habitat for endangered species, offer access to open spaces and views, or preserve historical resources.
- **Safety constraints** include areas where major safety risks, such as faults, flooding, unstable soils and natural gas wells are present. Safety constraints are among the most easily identifiable limitations to development. Federal, state, and local regulations often address safety constraints that could pose a threat to the safety and well-being of residents.
- **Infrastructure constraints** include roadway capacity, water supply, and landfill capacity.

The presence of a constraint does not mean that an alternative should be precluded from further consideration, but it may require special consideration to address significant resources and mitigate potentially significant effects. In addition, because the project crosses multiple jurisdictions and areas planned and permitted for development, consideration of previously permitted or mitigated resources and consistency with local general plan and specific plan policies will help determine how constraints are addressed and evaluated in terms of the level of constraint.



## Levels of Constraints

Where possible and appropriate, the level of constraint that a resource could have on the proposed project is identified. Four levels of constraints (High, Moderate, Low, and None) are used in this analysis to describe the potential design/mitigation/construction costs, extensive state or federal permitting requirements, construction schedule restrictions, and potential engineering challenges associated with environmental resources that are either known or have the potential to occur in the project area. Each of these levels is defined below.

- **High Constraints.** Known or documented sensitive resources or environmental issues associated with the alternative. The direct or indirect impacts associated with construction or operation of the project could result in high design/mitigation/construction costs, extensive state or federal permitting requirements, construction schedule restrictions, and potential engineering challenges associated with environmental resources.
- **Moderate Constraints.** Known or documented sensitive resources or environmental issues associated with the alternative. However, the impacts and associated costs, permitting requirements, construction schedule restrictions, and engineering challenges related to environmental resources are less than the High Constraints described above. This would include resources that have been already impacted or permitted/mitigated as part of other current or future projects.
- **Low Constraints.** No known or documented sensitive resources or environmental issues associated with the alternative. Low potential for impacts and minimal costs, permitting requirements, construction schedule restrictions, and associated engineering challenges related to environmental resources.
- **No Constraints.** No sensitive resource issues, impacts, costs or permits associated with the alternative.



## Assessment of Environmental Factors

Table 3 summarizes the estimated level of constraints for each environmental factor. The basis for determining these levels of constraints is described below by environmental factor.

**Table 3. Environmental Factors Level of Constraint**

Environmental Factor	Alternative 1	Alternative 2
Land Use	<i>Low</i>	<i>Low</i>
Growth	<i>None</i>	<i>None</i>
Farmlands	<i>Moderate</i>	<i>Moderate</i>
Public Services	<i>Low</i>	<i>Low</i>
Utilities and Service Systems	<i>Low</i>	<i>Low</i>
Traffic/Transportation	<i>Moderate</i>	<i>Moderate</i>
Visual/Aesthetics	<i>Low</i>	<i>Low</i>
Cultural and Tribal Resources	<i>Moderate</i>	<i>Moderate</i>
Hydrology and Water Quality	<i>Moderate</i>	<i>Moderate</i>
Geology, Soils, Seismic, and Topography	<i>Low</i>	<i>Low</i>
Paleontology	<i>Low</i>	<i>Low</i>
Hazardous Waste/Materials	<i>Low</i>	<i>Low</i>
Wildfire	<i>None</i>	<i>None</i>
Air Quality	<i>Moderate</i>	<i>Moderate</i>
Noise and Vibration	<i>Moderate</i>	<i>Moderate</i>
Energy and Climate Change	<i>Moderate</i>	<i>Moderate</i>
Biological Environment	<i>Moderate</i>	<i>Moderate</i>

### Constraints Levels

**Moderate:** Known or documented sensitive resources or environmental issues associated with the alternative. However, the impacts and associated costs, permitting requirements, schedule implications, and engineering challenges related to environmental resources are less than the High Constraints level. This would include resources that have been already impacted or permitted/mitigated as part of other current or future projects.

**Low:** No known or documented sensitive resources or environmental issues associated with the alternative. Low potential for impacts and minimal costs, permitting requirements, construction schedule implications, and associated engineering challenges related to environmental resources.

**None:** No sensitive resources issues, impacts, costs, or permits associated with the alternative.



## Land Use

### Setting

The following specific plans are adjacent to the project area.

- **Sutter Pointe Specific Plan.** The Sutter Pointe Specific Plan, approved by the Sutter County Board of Supervisors in 2009, proposes a diverse mix of land uses, including employment centers, many different housing types, retail shopping villages, recreation amenities, schools, community services, supporting on- and off-site infrastructure, roadway improvements, open space and various public uses (EDAW/AECOM 2014{ TC "EDAW/AECOM 2014" \f C \l "1" }).
- **Placer Vineyards Specific Plan.** The Placer Vineyards Specific Plan was originally approved by the Placer County Board of Supervisors in 2007 and amended in 2015. The plan area is located in southwestern Placer County and contains approximately 5,230 acres. Development includes a mixed-use planned community including 14,132 residential units, 274 acres of commercial uses, 919 acres of park and open space land, and 851 acres of quasi-public uses (i.e., public facilities/services, schools, roadways, religious facilities) (Placer County 2015{ TC "Placer County 2015" \f C \l "1" }).
- **Sierra Vista Specific Plan.** The Sierra Vista Specific Plan was approved by the City of Roseville in May 2010 and amended in 2012. The plan area consists of 2,064 acres west of Fiddyment Road, north of Riego Road/Baseline Road. The Plan area was annexed into the City of Roseville from unincorporated Placer County. Planned development is for 8,679 single and multi-family units, including approximately 259 acres of commercial, 106 acres of park, 304 acres of open space, 56 acres of schools, and 40 acres of urban reserve (City of Roseville 2010{ TC "City of Roseville 2010" \f C \l "1" }).
- **Curry Creek Community Plan.** The Curry Creek Community Plan is a proposed plan by Placer County. The plan area is an approximately 4,189-acre land area located in Placer County to the west of and directly adjacent to the Sierra Vista Specific Plan. This plan is not yet available.

Land uses are described from the western point of the project area (the SR 99/70 interchange in Sutter County) to the eastern end of the project area at Brady Lane in the City of Roseville (shown in Figure 2).

In Sutter County, the land both north and south of Riego Road is in active agricultural use. It is within the Sutter Pointe Specific Plan, and lands surrounding the specific plan boundary are designated as AG-80 (Agriculture-80-acre minimum) (PBS&J 2009{ TC "PBS&J 2009" \f C \l "1" }). The future Placer Parkway Bypass is located approximately 2 miles north of Riego Road in this portion of the county. The remaining land in the Sutter County portion of the project area to the Placer County boundary is designated as AG-80 both north and south of Riego Road.

In Placer County, the land north of Riego Road from the Sutter County border to the Curry Creek Community Plan area is designated as AG-80 (Placer County 2013{ TC "Placer County 2013" \f C \l "1" }). The land north of Riego Road between the Curry Creek Community Plan Area and the City of Roseville is part of the Sierra Vista Specific Plan. The land south of Riego Road in Placer County is part of the Placer Vineyards Specific Plan (from Sorento Road to Walerga Road). There is a low-



density residential neighborhood between Pleasant Grove Road and Newton Road in this portion of Placer County.

The land both north and south of Riego Road in the City of Roseville is developed with suburban residential land uses. Recent subdivisions are located north of Baseline Road between Brady Lane and Fiddymment Road. The subdivisions north of Baseline Road between Brady Lane and Fiddymment Road were developed primarily in the 1990s and early 2000s and are enclosed by soundwalls. The residences south of Baseline Road are older.

## Evaluation Methods

A reconnaissance-level survey, review of aerial imagery and pertinent literature, and coordination with land planners were the basis for identification of land use constraints in the alternative project areas. Local specific plans described above were reviewed for consistency.

Criteria based on Appendix G of the State CEQA Guidelines were used in the analysis. A constraint was identified if the alternatives would do any of the following.

- Physically divide an established community
- Substantially conflict with land use plans, policies, or zoning ordinances

## Findings

### Alternative 1

The Alternative 1 project area parallels Riego Road/Baseline Road from the SR 99/70 Interchange to Brady Lane in Roseville. Much of the project takes place within the existing right-of-way; however, strips of land outside of the right-of-way would be acquired along Baseline Road/Riego Road for the widening throughout the project area.

Right-of-way will be acquired on both sides of Baseline Road/Riego Road from Natomas Road to Pleasant Grove Road. The western portion of the project area from the SR 99/70 interchange to Steelhead Creek has already been planned for in the Sutter Pointe Specific Plan. The right-of-way acquisitions south of Baseline Road/Riego Road from Sorento Road to Walerga Road have already been planned for in the Placer Vineyards Specific Plan. The acquisitions north of Baseline Road/Riego Road between Natomas Road and Country Acres Road are not part of any existing land use plan. The remaining acquisitions north of Baseline Road/Riego Road are planned for under the Curry Creek Community Plan Area and the Sierra Vista Specific Plan Area. Road work between Watt Avenue and Crowder Lane in Roseville will occur entirely within the right-of-way. From Crowder Lane to Brady Lane in Roseville, strips of land will be acquired solely to the south.

There are two probable communities within the project corridor: the suburban residential area on the eastern end of the corridor in the City of Roseville and the residential area of Elverta between Pleasant Grove Road and Newton Road. Although the project would go through established communities, it would follow the existing roadway and no displacements would occur. Although right-of-way would be acquired between Brady Lane and Fiddymment Road, project activities in that area would be confined to restriping and conforming to the existing lane configuration of Baseline



Road/Riego Road. There would be little to no right-of-way take through the residential area in Elverta. All acquisitions are narrow strips of land parallel to the existing roadway. No properties would be displaced. Much of the project area is already analyzed in the specific plan documents discussed above. Furthermore, planning policies and zoning ordinances would be reviewed in the community impact assessment (CIA) and the consistency of the project would be assessed.

There is no constraint related to dividing an established community. The widening would convert some land designated for agricultural use to a transportation use. However, this would not change land use patterns in the project area and the level of constraint would be low.

## Alternative 2

Alternative 2 would include a multi-use recreational path parallel to Riego Road/Baseline Road, but would otherwise include the same improvements. Therefore, the requirements and constraints would be the same as those for Alternative 1.

## Growth

### Setting

The project area has experienced significant growth over the past decade. Sutter County has the highest percentage of population growth in the state, and population increased over 50 percent between 2010 and 2018 (U.S. Census Bureau 2018). The population is anticipated to grow to 421,376 by 2030 (California Department of Finance 2019). Placer County has experienced a growth rate of about 12 percent and the population is projected to be 456,945 by 2030 (California Department of Finance 2019). The City of Roseville has experienced a growth rate of about 16.5 percent in the past decade. Growth occurs throughout the undeveloped portions of the city, including the area east of Walerga Road and north of Riego Road/Baseline Road.

Table 4 shows the population estimates for the respective jurisdictions in 2010 and 2018.

**Table 4. Population Growth from 2010–2018**

Jurisdiction	2010 Population	2018 Population	Growth
City of Roseville	119,335	139,110	16.57%
Placer County	350,048	393,149	12.32%
Sutter County	46,200	96,807	52.28%

Source: U.S. Census Bureau 2018.

## Evaluation Methods

The analysis of growth-related, indirect impacts follows the first-cut screening guidelines provided in Caltrans' *Guidelines for Preparers of Growth-Related, Indirect Impact Analyses* (California Department of Transportation 2006). The first-cut screening analysis focused on addressing the following questions.



- To what extent would travel times, travel cost, or accessibility to employment, shopping, or other destinations be changed? Would this change affect travel behavior, trip patterns, or the attractiveness of some areas to development over others?
- To what extent would change in accessibility affect growth or land use change—its location, rate, type, or amount?
- To what extent would resources of concern be affected by this growth or land use change?

## Findings

### Alternative 1

Changes in access would be minimal. It is anticipated that there would be additional access points as new development that is planned in the adjacent specific plans is built out, but this would not be a result of the project; rather, the project would accommodate the anticipated growth that is planned for the area. As stated above, the project would involve some minor right-of-way acquisition that would not result in changes in overall land use patterns.

Although the widening improvements could temporarily affect some neighborhoods, none of the proposed project elements would require the removal of existing housing or displace people. Roadway widenings can sometimes influence or promote growth. However, the increased transportation capacity is already identified and addressed in city and county general and specific plans. Furthermore, a first cut screening analysis will be completed in the CIA. It is anticipated that no further analysis will be necessary and that there would be no constraint on the project alternatives related to growth.

### Alternative 2

Alternative 2 would include a multi-use recreational path south of Riego Road/Baseline Road, but would otherwise include the same improvements. Therefore, the requirements and constraints would be the same as those for Alternative 1.

## Farmlands

### Setting

The project area is located in a rural landscape in the broad, nearly flat expanse of the Sacramento Valley. The rural landscape is predominantly in agricultural use, interrupted by isolated farmhouses and buildings, pockets of residential development, clusters of trees, canals, roads, power lines, and other utilities. The topography is level and supports a variety of agricultural crops and grazing land with various heights and densities, with occasional trees and irrigation canals.

Much of the undeveloped land within the project area is agricultural. For the purposes of this report, constrained agricultural lands are those designated as prime or important farmlands under CEQA, lands with Williamson Act contracts, and lands with agricultural easements.



The following definitions are excerpted from the California Department of Conservation's (DOC's) Division of Land Resource Protection, A Guide to the Farmland Mapping and Monitoring Program, 2004 Edition, Appendix B. (California Department of Conservation 2004{ TC "California Department of Conservation 2004" \f C \l "1" }).

- **Prime Farmland.** Prime Farmland is land which has the best combination of physical and chemical characteristics for the production of crops. It has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops when treated and managed, including water management, according to current farming methods. Prime Farmland must have been used for irrigated agricultural production at some time during the four years prior to the mapping date. It does not include publicly owned lands for which there is an adopted policy preventing agricultural use.
- **Farmland of Statewide Importance.** Farmland of Statewide Importance is land other than Prime Farmland which has a good combination of physical and chemical characteristics for the production of crops. It must have been used for irrigated agricultural production at some time during the four years prior to the mapping date. It does not include publicly owned lands for which there is an adopted policy preventing agricultural use.
- **Unique Farmland.** Unique farmland consists of lesser quality soils used for the production of the state's leading agricultural crops. this land is usually irrigated, but may include nonirrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.
- **Urban and Built-Up Land.** Urban and built-up land is occupied by structures with a building density of at least one unit to 1.5 acres, or approximately six structures to a 10-acre parcel. Common examples include residential, industrial, commercial, institutional facilities, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, and water control structures.
- **Other Land.** Other land is land not included in any other mapping category. Common examples include low density rural developments, brush, timber, wetland, and riparian areas not suitable for livestock grazing, confined livestock, poultry, or aquaculture facilities, strip mines, borrow pits, and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as other land.

In the Sutter County portion of the project area, the land both north and south of Riego Road/Baseline Road is classified as farmland of statewide importance, with a small parcel of grazing land (California Department of Conservation 2016a{ TC "California Department of Conservation 2016a" \f C \l "1" }). In the Placer County portion of the project area, the land north of Riego Road/Baseline Road is primarily classified as farmland of local importance, unique farmland, and grazing land. The land south of Riego Road/Baseline Road is primarily classified as other land, farmland of local importance, and grazing land. Within the City of Roseville, the land is primarily classified as urban and built-up land north of Riego Road/Baseline Road and other land south of Riego Road/Baseline Road (California Department of Conservation 2016b{ TC "California Department of Conservation 2016b" \f C \l "1" }). Figure 3 shows the farmland classifications in the project area.



## Evaluation Methods

To identify constraints related to agriculture, geographic information system (GIS) data obtained from the Farmland Mapping and Monitoring Program of the California Resources Agency and overlaid on base maps of the alternatives were used as the basis for analysis. Criteria based on Appendix G of the State CEQA Guidelines were also used in the analysis. A constraint was identified if the alternatives would substantially do one of the following.

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural use
- Conflict with existing zoning for agricultural use or a Williamson Act contract

## Findings

### Alternative 1

Land classified as farmland of statewide importance is located between Pleasant Grove Road South and Steelhead Creek. This land has all been analyzed in the Sutter Pointe Specific Plan and significant and unavoidable impacts to agricultural resources have been disclosed in *Sutter Pointe Specific Plan Final Environmental Impact Report* (Sutter Pointe EIR) (EDAW 2009{ TC "EDAW 2009" \f C \l "1" }). *The Placer Vineyards Specific Plan Final Environmental Impact Report and Environmental Impact Statement* (Placer Vineyards Specific Plan EIR and EIS) concluded that impacts to agricultural resources were significant and unavoidable (Quad Knopf 2006, U.S. Army Corps of Engineers 2014{ TC " U.S. Army Corps of Engineers 2014" \f C \l "1" }). The *Sierra Vista Specific Plan Final Environmental Impact Statement* (Sierra Vista EIS) concluded that impacts on agricultural resources were less than significant with implementation of mitigation measures to compensate and preserve farmland on and off-site (U.S. Army Corps of Engineers 2013{ TC " U.S. Army Corps of Engineers 2013" \f C \l "1" }). The PG&E 406/407 Revised Final EIR concluded that only temporary impacts would occur in the project area, which runs along the entire northern portion of the project area parallel to Riego Road/Baseline Road (Michael Brandman Associates 2009{ TC "Michael Brandman Associates 2009" \f C \l "1" }).

Several areas have not been previously analyzed, including the farmland located in Placer County, north of Riego Road/Baseline Road, between Steelhead Creek and the City of Roseville border. Minor acquisitions could be acquired, but they would be strips of land adjacent to the roadway and are not likely to prevent the parcel from continuing agricultural use. No Williamson Act contracts would be affected. Impacts on farmlands, including the total amount of acreages that would be acquired for each alternative, would be further analyzed in the CIA. Impacts on farmlands located in the portions of the project that overlap with Specific Plans are accounted for in those Specific Plan EIRs and additional impacts would not be addressed. Impacts on farmlands along the Pacific Gas & Electric (PG&E) 406/407 alignment would be quantified and those impacts analyzed because the PG&E 406/407 project had only temporary impacts on farmlands within the project area, and therefore, they have been returned to farmland. The level of constraints is moderate, because although some important farmland would be acquired and converted to transportation use, no mitigation would be required and schedule impacts are unlikely.



## **Alternative 2**

Alternative 2 would have similar constraints as Alternative 1 (i.e., moderate). A multi-use recreational path parallel to Riego Road/Baseline Road is located within the previously analyzed specific plan areas and would not require additional right-of-way. Impacts on farmlands, including the total amount of acreages that would be acquired for each alternative, would be further analyzed in the CIA.

## **Public Services**

### **Setting**

The project area encompasses unincorporated areas Sutter County, Placer County (including the community of Elverta), and the City of Roseville. The project vicinity is composed primarily of large parcels, some of which have low-density, single-family residential development, agricultural land, and in the easternmost area, residential developments. The City of Roseville is largely built-out with single-family residential uses and other community facilities. The nearest community facilities, such as churches or other gathering places, are located east in the City of Roseville, and south of the project area in the communities of Elverta and Antelope.

### **Police**

Police services in the project areas are provided by the following agencies.

- The Roseville Police Department services the City of Roseville
- The Placer County Sheriff's Department provides law enforcement services within the unincorporated areas of Placer County
- The Sutter County Sheriff's Departments provides law enforcement services within the unincorporated areas of Sutter County
- The California Highway Patrol enforces traffic regulations outside the cities, along SR 99

The Placer County Sheriff's Office Dry Creek Service Center is located at 2955 PFE Road. The Roseville Police Department is located at 1051 Junction Boulevard.

### **Fire**

Fire protection services in the project areas are provided by the following agencies.

- The Roseville Fire Department serves the City of Roseville
- The Placer County Fire Department serves Placer County
- The Sutter County Fire Department serves Sutter County

The closest station to the project area is Roseville Fire Station 5, located at 1565 Pleasant Grove Boulevard.



**Schools**

Table 5 lists the schools (both public and private) within 2 miles of the project area.

**Table 5. Schools in the Project Vicinity**

School	Location	Approximate Distance from Project Area
Modoc Railroad Academy	7044 Natomas Road, Sutter County	1.8 miles north
Alpha Technology Middle School	8920 Elwyn Avenue, Elverta	1.3 miles south
St. John’s Episcopal Church/School	2351 Pleasant Grove Boulevard, Roseville	1.3 miles north
West Park High School	2401 High School Road, Roseville	2.2 miles north
Junction Elementary School	2150 Ellison Drive, Roseville	1.8 miles north
Coyote Ridge Elementary School	1751 Morningstar Drive, Roseville	0.5 mile north
Wishing Well Preschool	8026 Cook Riolo Road, Roseville	Adjacent
Creekview Ranch Middle School	8779 Cook Riolo Road, Roseville	0.8 mile south
Woodcreek High School	2551 Woodcreek Oaks Boulevard, Roseville	0.6 mile north
Silverado Middle School	2525 Country Club Drive, Roseville	0.4 mile north
Heritage Oak Elementary School	2271 Americana Drive, Roseville	0.3 mile north
Kaseburg School	1040 Main Street, Roseville	0.4 mile east

**Evaluation Methods**

A reconnaissance-level survey and review of aerial imagery and pertinent literature were the basis for identification of constraints in the alternative project areas. Criteria based on Appendix G of the State CEQA Guidelines were used in the analysis. A constraint was identified if the alternatives would substantially affect emergency service response times or ratios, or access to community facilities.

**Findings**

**Alternative 1**

Construction of the project, which involves road work on a 12-mile stretch of Riego Road/Baseline Road, could have temporary impacts on public services including emergency access. Ongoing construction activities could result in temporary lane closures and other delays, which could slow or stop emergency vehicles, increasing response times and impeding existing service while the project is under construction. A construction traffic control plan that follows the applicable standards of the agency responsible for the affected roadway would ensure continued access by emergency vehicles during construction of the proposed project. Implementation of such a traffic control plan would ensure a low constraint on emergency services.



Depending on the construction schedule, delays could impact school bus routes. If construction is limited to the summer months, no constraint would occur. During the school year, a traffic control plan would ensure that access to schools is maintained at all times, that detours are used and publicized, and that delays are minimized. Therefore, constraints on public services would be low.

## **Alternative 2**

There are no appreciable differences between the alternatives with respect to public service constraints (i.e., low).

# **Utilities and Service Systems**

## **Setting**

### **Wastewater**

Much of the unincorporated areas of Sutter County utilize private septic systems for their wastewater disposal. Sutter County's Development Services Department Environmental Health unit is responsible for water and wastewater monitoring, including onsite sewage disposal, water wells, and well monitoring (Sutter County 2020{ TC "Sutter County 2020" \f C \l "1" }).

Sewer services provided by Placer County include the operation and maintenance of five wastewater treatment facilities, 44 sewer pump stations, almost 300 miles of sewer pipe, and over 450 septic tank effluent pump systems. A portion of the project area appears to be located within the Dry Creek Sewer Maintenance District (Placer County 2020{ TC "Placer County 2020" \f C \l "1" }).

The City of Roseville operates two wastewater treatment facilities that have the capacity to treat up to 30 million gallons of water per day. The City of Roseville maintains over 500 miles of sewer line and delivers 1 billion gallons of recycled water per year (City of Roseville 2020{ TC "City of Roseville 2020" \f C \l "1" }).

### **Solid Waste**

No solid waste management facilities or transfer stations are located within Sutter County. The Regional Waste Management Authority works in conjunction with Yuba-Sutter Disposal, Inc. to provide for the collection, recycling, and disposal of municipal solid waste in Sutter County.

In Placer County, solid waste disposal is available at the Western Regional Landfill, which is permitted to accept waste through January 2058 (Western Placer Waste Management Facility 2020).

### **Water**

Much of the unincorporated areas of Sutter County utilizes private wells for their water supply. Sutter County's Development Services Department Environmental Health unit monitors well water quality.



In Placer County, water is provided by the Placer County Water Agency, which operates an extensive raw water distribution system of canals, ditches, flumes, and reservoirs. Drinking water is produced through a network of eight water treatment plants.

The City of Roseville provides drinking water for its residents. Roseville's water supply comes from Folsom Lake and is treated at the city's treatment plant on Barton Road. During times of water shortage or emergency outages, the City of Roseville also maintains five groundwater wells and several interties with surrounding water agencies.

The unincorporated areas of Placer County are also serviced by the Elverta/Rio Linda Community Water District, the Sacramento Suburban Water District, and the California American Water, a private water purveyor.

### **Gas and Electricity Service**

There is a PG&E natural gas line along Riego Road/Baseline Roads via a high-pressure underground distribution system that parallels the length of the study area.

## **Evaluation Methods**

A reconnaissance-level survey, review of aerial imagery and pertinent literature were the basis for identification of constraints in the alternative study areas. Criteria based on Appendix G of the State CEQA Guidelines were used in the analysis. A constraint was identified if the alternatives would substantially do any of the following.

- Exceed capacity of wastewater treatment facilities
- Require additional water supply to serve the project
- Exceed landfill or solid waste disposal capacity
- Conflict with existing public utility services

## **Findings**

### **Alternative 1**

A CIA would be prepared for the project that would address impacts related to utilities.

### **Water and Wastewater**

The project would not result production of wastewater or demand on the sewer system during construction or operation.

Construction would require water for dust control, which could be obtained from local agricultural wells and canals or could be provided by water trucks. The source of such water would need to be based on the availability and capacity of the water systems in the study area vicinity. Runoff from construction would be discharged in storm drains per local permits and ordinances and the amount of discharge is not anticipated to exceed local capacities. This would be considered a low constraint.



### **Solid Waste Disposal**

Construction activities are expected to produce a relatively small amount of construction-related waste. The magnitude of impacts are not anticipated to exceed the capacity of landfills in the region. No operational impacts would occur related to solid waste. No constraint was identified related to solid waste disposal.

### **Electricity and Natural Gas**

Electricity for lighting during construction could be powered by a diesel generator, but overall energy usage would be low. If roadway improvements include new lighting these impacts will be analyzed in the environmental document.

Activities taking place during construction of the project could inadvertently contact other underground utility lines or facilities, possibly leading to short-term service interruptions. In addition, coordination with PG&E and other energy providers would be necessary to ensure that no conflicts arise that would pose the potential for service interruptions or a public hazard. Because the project area has been thoroughly studied, the location of underground utilities is known and additional surveys and coordination would not be needed. This constraint is considered low.

### **Alternative 2**

Alternative 2 could require additional electricity if lighting is included as part of the designated bicycle/pedestrian path adjacent to Riego Road/Baseline Road. This constraint is considered low due to the knowledge of existing utilities underground in the study area, and because minimal electricity, if any, would be used during project operations.

## **Traffic/Transportation**

### **Setting**

Regional access to the project area is available along SR 99/70. UPRR crosses the study area from the northwest to southeast just west of Natomas Road. Current levels of service on area roadways were not available for this constraints level analysis.

Sacramento Regional Transit operates Route 9-Rio Linda, which travels along Dry Creek Road, Elkhorn Boulevard, Rio Linda Boulevard, Elverta Road, and Watt Avenue near the study area. There are no transit routes along Riego Road/Baseline Road.

Currently, Riego Road/Baseline Road is 2 lanes in the Sutter County and Placer County portion of the study area. There are no dedicated bicycle lanes or pedestrian facilities. Main cross streets are Natomas Road, Locust Road, Watt Avenue, Fiddymment Road/Walerga Road.

The road is two lanes from the SR 99/70 interchange to just west of Fiddymment Road/Walerga Road, where a center turn lane begins and extends to Foothills Boulevard. Dedicated bicycle and pedestrian facilities begin at Fiddymment Road/Walerga Road and extend to Foothills Boulevard in the City of Roseville. There are two lanes in the westbound direction between Foothills Boulevard and Fiddymment Road/Walerga Road.



There are various private airports in the vicinity as well. Riego Flight Strip is located 1.2 miles west of the SR 99/70 interchange. Sopwith Farm Airport is located approximately 1.8 mile southwest. Teneco Tractor Airport is located 0.9 mile north of Riego Road/Baseline Road. Holtsmans Airport is located 1.5 miles south of Riego Road/Baseline Road.

## Evaluation Methods

A reconnaissance-level survey and review of aerial imagery and pertinent literature were the basis for identification of constraints in the alternative study areas. Criteria based on Appendix G of the State CEQA Guidelines were used in the analysis. A constraint was identified if the alternatives would substantially do any of the following.

- Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities
- Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)
- Result in inadequate emergency access

## Findings

### Alternative 1

Construction-related vehicles on local roadways would increase during construction of the proposed project. Potential delays could occur during construction which could impede emergency access or bicycle and transit access. As discussed under Public Services, implementation of a traffic management plan during construction would minimize or avoid construction traffic impacts. The plan would include measures such as keeping lane closures to a minimum during peak hours, notifying residents and schools, providing access to driveways and private roads, and notifying emergency service providers. Overall, the traffic-related constraints issues associated with roads and highways during construction would be considered low.

Because the project is capacity-increasing, there would be increased vehicular traffic associated with project operation. However, the additional lanes are anticipated to serve planned growth in the region. The surrounding area includes multiple specific plans, and future development and growth associated with those plans will occur regardless of the project. Rather, the project would ensure that the planned growth would have adequate transportation facilities. The project also includes pedestrian and bicycle infrastructure, and landscaping which would be beneficial impacts to existing and future residents of the study area. Nevertheless, traffic from project operation is anticipated to present a moderate constraint because traffic operations and vehicle miles traveled (VMT) would likely increase. A traffic operations assessment report (TOAR) would be required and VMT for Alternative 1 will be quantified and compared to existing conditions and future no project conditions to assess impacts related to increased VMT.



## **Alternative 2**

Alternative 2 would have similar impacts and constraints as Alternative 1, but the multi-use recreational path parallel to Riego Road/Baseline Road would be an additional beneficial impact to the community.

## **Visual/Aesthetics**

### **Setting**

The project is located primarily in a rural landscape in the broad, nearly flat expanse of the Sacramento Valley. The rural landscape is predominantly in agricultural use, interrupted by isolated farmhouses and outbuildings, clusters of trees, canals, roads, and power lines and other utilities. The topography is level and supports a variety of agricultural crops and grazing land with variable heights and densities, with occasional trees and irrigation canals. Depending on weather conditions, the Sacramento skyline and the peaks of the Sierra Nevada are visible to the east, and on especially clear days, the Coast Ranges may be visible to the west.

Low-density suburban development is located in the western portions of the project area near the railroad and the community of Elverta. The eastern end of the corridor includes low density residential development on the south side of the road and primarily planned residential developments behind soundwalls on the north side of the road. Baseline Road through this area is a four-lane road with sidewalks.

### **Evaluation Methods**

A reconnaissance-level survey and review of aerial imagery and pertinent literature were the basis for identification of constraints in the alternative project areas. Criteria based on Appendix G of the State CEQA Guidelines were used to determine where constraints could exist. A constraint was identified if the alternatives would substantially do one of the following.

- Adversely affect scenic vistas
- Damage scenic resources
- Degrade visual character or quality
- Create new source of substantial light or glare

### **Findings**

#### **Alternative 1**

While the road widening would result in a change in the immediate visual character of the area, mid-range and long-range views would not be affected and the roadway would be consistent with plans and conform to the existing condition in the eastern portion of the project area. All crossings (railroad, canal) will be at grade. All improvements would comply with local plans and requirements. However, because viewer sensitivity may be higher and there is a potential for



cumulative effects, it is anticipated that a minor or abbreviated Visual Impact Assessment would be necessary. It is expected that no visual simulations would be required.

The specific plans in the project area analyzed the impacts of development on visual/aesthetic resources. The Sierra Vista Specific Plan EIR concluded that impacts of converting grassland to urban development would be significant and unavoidable. The Placer Vineyards EIR and EIS and Sutter Pointe EIR and EIS had similar conclusions. Because scenic vistas and visual character is going to change in the project area with the planned development, it is anticipated that visual impacts related to the proposed project would be minimal, and therefore the level of constraints would be low. Opportunities to minimize operational impacts are related to design, landscaping, and lighting. PCTPA intends to comply with local general and specific plans to provide a uniform standard throughout the 12 miles of roadway. Opportunities to minimize temporary construction impacts include minimizing effects of lighting and siting construction equipment and storage areas to avoid impacts on residences.

### **Alternative 2**

Alternative 2 would be the same as Alternative 1. It would include a multi-use path, but that would not result in any substantial to change from Alternative 1 as it relates to visual resources. Constraints would also be low under Alternative 2.

## **Cultural and Tribal Resources**

### **Setting**

Record searches conducted in 2016 for a 100-foot corridor along Riego Road/Baseline Road identified 27 cultural resources along or adjacent to the current project. These consist of historic-era resources with the majority being built environment resources (i.e., roads, structures, features). The past record searches also revealed that most of Riego Road/Baseline Road and adjacent lands have been previously surveyed between 2005 and 2016 as a result of the three Specific Plan developments to the north and south of Riego Road/Baseline Road (e.g., Sierra Vista, Placer Vineyards, Sutter Pointe) and a PG&E natural gas line project (PG&E Line 406/407). A current record search is pending that may identify additional resources and surveys.

In addition to various potentially historic buildings located along the project corridor, the project may also affect the Union Pacific Railroad, the East Main Drainage Canal, and Reclamation District 1000, an NRHP eligible historic district. The project area is not particularly sensitive for archaeological resources, but there is the potential for buried deposits.

No known tribal cultural resources are located along the project corridor.

### **Evaluation Methods**

A review of aerial imagery, previous studies, and pertinent literature was the basis for identification of cultural resources constraints in the alternative project areas. Local specific plans described above were reviewed for consistency.



Criteria based on Appendix G of the State CEQA Guidelines were used in the analysis. A constraint was identified if the alternatives would substantially do any of the following.

- Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5
- Disturb any human remains, including those interred outside of formal cemeteries
- Cause a substantial adverse change in the significance of a tribal cultural resource as defined in California Public Resources Code 21074
- Change in the significance of a Tribal Cultural Resource as defined in California Public Resources Code Section 21074

## Findings

### Alternative 1

The project could result in impacts on cultural resources or tribal cultural resources. Much of the project area has been examined for cultural resources and/or is covered by an approved plan that includes an evaluation of impacts on cultural resources and/or completed National Historic Preservation Act Section 106 process. Technical analysis would rely on information from these previous technical studies, which would be obtained from agencies or from the California Historical Resources Information System. Additional research and consultation efforts would be necessary in those areas where Section 106 has not been completed (i.e., the areas outside the Sierra Vista, Placer Vineyards, and Sutter Pointe Specific Plan areas). Additional survey would be necessary for the areas not covered by approved specific plans that have not been previously examined in the past 5 years. It is anticipated that an Archaeological Survey Report (ASR) and a Historic Resources Evaluation Report (HRER), as well as Historic Property Survey Report (HPSR) that serves as a cover document, would be required. Any site records would be appended to these reports. It may be necessary to address the effect of the project on historic properties in a Finding of Effect (FOE).

Overall, the project area does not appear to be particularly sensitive for archaeological resources.

There are a number of historic properties, and potential historic properties along the corridor, and the corridor passes through Reclamation District 1000 and crosses Steelhead Creek and the Union Pacific Railroad. While the Sutter Point Specific Plan addressed the first, the latter two will need to be addressed for this project. Minimizing changes to these features will reduce the potential to affect the significance of these properties. There are two residences that may be historic on the south side of Baseline Road east of Walerga Road. Minimizing or eliminating right-of-way takes from those properties may reduce efforts for the Historical Resources Evaluation Report and State Historic Preservation Officer consultation by enabling the lead federal agency to exclude those properties from the area of potential effects. Because there are both known and potential historic period resources along the project corridor, but the impacts to some resources are already mitigated and the costs and schedule implications associated with the others are manageable, the level of constraints is moderate.



## Alternative 2

Alternative 2 would be similar to Alternative 1, but the addition of the multi-use path would result in additional area that would need to be analyzed, and additional construction that could result in impacts on previously undiscovered buried archaeological resources. Constraints would be similar as well.

# Hydrology and Water Quality

## Setting

### Surface Water

The project occurs in the Upper Coon-Upper Auburn Watershed. In the project area, the major surface water feature is Steelhead Creek. Steelhead Creek flows from north to south in the central portion of the project area. Steelhead Creek is on the Clean Water Act Section 303(d) impaired water body list due to elevated polychlorinated biphenyl (PCB) concentrations. The project corridor also crosses Curry Creek twice, which is Section 303(d) listed as impaired for pyrethroids and toxicity. Kaseberg Creek, an unnamed southeastern tributary (from Silverado Middle School to Timber Creek Golf Course), and Kaseberg Creek, an unnamed southern tributary (from Baseline Road to Timber Creek Golf Course) are both within 0.5-mile and are Section 303(d) listed for bifenthrin, cyfluthrin, cyhalothrin/lambda, cypermethrin, and deltamethrin toxicity (California State Water Resources Control Board 2018{ TC "State Water Resources Control Board 2018" \f C \l "1" }).

### Groundwater

The project area overlies the North American Groundwater Subbasin within the Sacramento Valley Groundwater Basin (California Department of Water Resources 2006{ TC "California Department of Water Resources 2006" \f C \l "1" }). The North American groundwater subbasin is designated a high priority basin.

Groundwater in the upper aquifer is generally of high quality in the surrounding areas; however, data in the immediate vicinity of the project area are sparse. Depth to groundwater is reported to be 10 feet below ground surface (bgs) near the Sacramento River and deepens to 70–80 feet bgs at the eastern edges of the project area. The depth to groundwater in the rice farming areas west of Steelhead Creek may be shallower when rice fields are flooded. Hydrograph data show groundwater levels are in decline.

### Flood Hazards

A floodplain is a geographic area of relatively level land that is occasionally subject to inundation by surface water from rivers or streams that lie within the floodplain. A *100-year flood* refers to the maximum level of water that is expected to inundate a floodplain on average once every 100 years (i.e., a 1 percent chance of being inundated per year). The Federal Emergency Management Agency (FEMA) estimates the boundaries for 100-year floodplains, referred to as flood hazard areas, and produces Flood Insurance Rate Maps (FIRMs) that define the 100-year floodplain boundaries. In



areas where detailed floodplain studies have not been conducted, FEMA typically designates 100-year floodplains as Zone A on the FIRMs.

Most of the project area is outside of a 100-year floodplain. The western portion of the project area along SR 99/70 is designated as Zone AE, within the 100-year floodplain, where base flood elevations are known. The base flood elevation was determined to be 36 feet above mean sea level. The western portion also includes Zone X, areas of moderate flood hazard, usually the area between the limits of the 100-year and 500-year floods.

## Evaluation Methods

Potential constraints related to hydrology and water quality were evaluated by reviewing water quality studies, water management plans, and relevant information from federal, state, and local water resource agencies with jurisdiction in the project area, as well as the specific plans and PG&E 406/407 environmental document.

Potential constraints associated with hydrology and water quality were evaluated for each of the criteria set forth in Appendix G of the CEQA Guidelines. A constraint was identified if the project would result in any of the following actions.

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality
- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin
- 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
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces in a manner which would:
  - Result in substantial erosion or siltation on-or off-site
  - Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site
  - 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
  - Impede or redirect flood flows
  - substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site



## Findings

### Alternative 1

Alternative 1 crosses Steelhead Creek and Curry Creek. Dry Creek is located south of the project. Alternative 1 is within 0.5-mile of Kaseberg Creek.

Project construction activities such as grading, stockpiling of spoil materials, and other earth-disturbing activities could result in short-term water quality impacts associated with soil erosion and subsequent sediment transport to adjacent properties, roadways, or watercourses via storm drains. Construction activities would include the handling of hazardous materials such as fuels and lubricants, and could result in chemical spills into storm drains or groundwater aquifers if proper minimization measures are not implemented. Because more than 1 acre would be disturbed for project construction, PCTPA would be required to obtain coverage under State Water Board National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order 2010-0014-DWQ). Compliance with the General Permit would require preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP).

In the event construction dewatering would be needed, dewatering would be conducted on a temporary basis. Groundwater removed during dewatering would be discharged to comply with the Limited Threat General Order (per the General Waste Discharge Requirements of the NPDES Permit for Limited Threat Discharges to Surface Waters issued by the Regional Water Quality Control Board, Central Valley Region). If discharge limits were exceeded, package treatment systems could likely be used to treat the water to the appropriate standards. The effect of dewatering activities on the groundwater table is expected to be temporary due to recharge from the annual flooding of the rice fields in the area where dewatering activities may be needed. The possibility of water quality issues associated with dewatering activities should be further evaluated during preparation of the Water Quality Assessment Report (WQAR) and prior to project construction. All three specific plans include a component for drainage and measures to ensure that development addresses stormwater drainage and flows. Water quality impacts are addressed through compliance with construction best management practices and SWPPPs for all three projects. The Sutter Pointe Specific Plan is located within Reclamation District 1000; therefore, it must comply with the criteria described in the agreement between Sutter County and Reclamation District 1000.

The project would require right-of-way acquisition for the road widening, and would result in an increased amount of impervious surface and associated runoff along the roadway. A Water Quality Assessment Report addressing potential impacts on water quality would be required. The study would address anticipated changes in to the physical and biological characteristics of the aquatic environments (including groundwater, water bodies and drainage features). The study would also address impacts on beneficial uses and temporary and long-term impacts on water quality. Impacts and mitigation would address those areas not previously studied and permitted.

The project includes plans for drainage. Opportunities to address and improve water quality through the use of biotreatments exist throughout the project corridor. Portions of the project within the Sutter Pointe Specific Plan are within the 100-year floodplain. Because the constraints



related to flood plain have already been addressed and mitigated by another project, the level of constraints is moderate.

## **Alternative 2**

Alternative 2 would be similar to Alternative 1, but the addition of a multi-use path would result in additional area that would need to be analyzed, introduce additional impervious surfaces and associated runoff, and would require additional construction and ground disturbing activities that could result in impacts on water resources. The level of constraints would be moderate, similar to Alternative 1.

# **Geology, Soils, Seismicity, and Topography**

## **Setting**

### **Soil Expansion**

Information regarding the near-surface soils underlying the project area was obtained from the University of California, Davis (UC Davis), California Soil Resource Lab (University of California Davis 2016{ TC "University of California Davis 2016" \f C \l "1" }}, which is based on Soil Survey Geographic soil survey data from the U.S. Department of Agriculture, Natural Resources Conservation Service.

Expansive soils are those that contain significant amounts of plastic clays that shrink and swell depending on their moisture content and can cause damage to foundations and surface improvements. According to the soil properties mapping application from the UC Davis California Soil Resource Lab web, the near-surface soils in the project area contain approximately 30 to 45 percent clay. Placer County planning documents indicate a moderate-to-high soil expansion potential in low-lying areas (Placer County 1994{ TC "Placer County 1994" \f C \l "1" }). Some of the near-surface soils in the project area likely meet the definition of expansive soils as defined in Table 18-1-B of the Uniform Building Code (Placer County 1994{ TC "Placer County 1994" \f C \l "1" }).

### **Fault Zones**

A fault is considered active if it has generated earthquakes accompanied by surface rupture during historic time (approximately the last 150 years) or has shown evidence of fault displacement during the Holocene period (approximately the last 11,000 years) (California Department of Conservation, California Geological Survey 2016{ TC "California Department of Conservation, California Geological Survey 2016" \f C \l "1" }). A fault is considered potentially active if there is evidence of fault displacement during the Quaternary period (approximately the last 1.6 million years). A fault is considered inactive if the most recent evidence of fault displacement pre-dates the Quaternary period (i.e., the most recent movement is older than 1.6 million years). The Alquist-Priolo Act requires the establishment of earthquake fault zones around known active faults in California, and requires additional study to evaluate the fault rupture hazard to projects proposed within these zones.



A number of active and potentially active faults are located in the project region and have the potential to produce strong ground shaking. The faults discussed below could cause strong ground shaking in the project area during the life of the project.

**Foothills Fault System.** The Foothills Fault System is a major north-northwest trending group of relatively short, discontinuous faults extending along the western Sierra Nevada foothills from Oroville in the north to near Fresno in the south. Faults in the Foothills Fault System near the project area can be considered to be a northerly extension of the Bear Mountain Fault Zone and include several faults that are considered to be of Quaternary age. The northern Foothills Fault System is considered a system of low-level seismicity, and has little history of seismic activity. However, seismic monitoring in this area is not extensive, and there is little information available on the history of activity for this fault zone. The maximum credible earthquake on the Foothills Fault System is 6.5 Richter magnitude (Yuba County 1994{ TC "Yuba County 1994" \f C \l "1" }).

**San Andreas Fault System.** The faults associated with the San Andreas Fault System in the Coast Ranges west of the project area are some of the most active in the United States, and have the potential to cause strong ground shaking in the project area. The San Andreas Fault System, with numerous active branches, passes approximately 100 miles west of the project area and is the most active earthquake-producing fault system in California. The San Andreas Fault is an active strike-slip fault that extends north-northwest from the Gulf of California in Mexico to the Mendocino coast in northern California, and accommodates the majority of movement between the Pacific and North American tectonic plates. Faults associated with this system include the Hayward Fault, Calaveras Fault, Concord Fault, Greenville Fault, and Maacama Fault. This fault system is historically active and has generated earthquakes ranging from 6 to 8 Richter magnitude. Major earthquakes on this fault system have the potential to cause strong seismic shaking in the project area (Bryant and Cluett 1998, 2000, 2002{ TC "Bryant and Cluett 1998, 2000, 2002" \f C \l "1" }).

**Willows Fault Zone.** The Willows Fault Zone is a concealed, pre-Quaternary fault zone, believed to be part of the Coast Range-Sierran Block Boundary Zone (Helley and Harwood 1985{ TC "Helley and Harwood 1987" \f C \l "1" }). Therefore, although the fault is considered pre-Quaternary, it has been described as potentially capable of generating infrequent, moderate-magnitude earthquakes along its northern extent, which is north of the Sutter Buttes (Kleinfelder 2008{ TC "Kleinfelder 2008" \f C \l "1" }). Although there is a small possibility that an earthquake along this fault could result in strong ground shaking that would affect the project area, there is no evidence that an earthquake on this fault would result in a rupture that would extend to the ground surface.

### **Strong Ground Motion**

Earthquakes generated on the faults discussed above could produce strong ground shaking in the project area during the life of the proposed project. Shaking from an earthquake can result in structural damage and can trigger ground failure, such as liquefaction. Ground shaking is correlated to the earthquake magnitude, duration, distance from the source, and local ground conditions, which may amplify or dampen seismic waves as they travel from the underlying bedrock to the ground surface.



The project area is in a region of California associated with generally low seismic shaking potential, as indicated on the DOC California Geological Survey map *Earthquake Shaking Potential for California* (California Geological Survey 2003{ TC "California Geological Survey 2003" \f C \l "1" }).

## **Landslides**

A landslide is a mass of rock, soil, or debris that has been displaced downslope by sliding, flowing, or falling. There is a low probability for landslides in the project area because of the gentle slopes. The project area is not located within a state-designated landslide hazard area, as indicated by the DOC California Geological Survey Landslide Map Index (California Department of Conservation, California Geological Survey 2016{ TC "California Department of Conservation, California Geological Survey 2016a" \f C \l "1" }). Planning documents for Placer County indicate a potential for landslide in hilly areas, where topographic relief and slope are greater than those in the project area (Placer County 1994{ TC "Placer County 1994" \f C \l "1" }). Planning documents for Sutter County indicate that, aside from the Sutter Buttes, Sutter County is a landslide-free zone based on its gentle slopes (Sutter County 2008{ TC "Sutter County 2008" \f C \l "1" }). Based on this information, landslides are not likely to affect the proposed project.

## **Subsidence**

Land subsidence is the downward settlement of a large area of land, and has the potential to result in surface infrastructure damage. Historical subsidence in California has resulted from several processes, including oil and gas production, groundwater withdrawal, hydrocompaction, and peat oxidation. Parts of the western Sacramento Valley have been affected by subsidence resulting from extensive groundwater withdrawal or natural gas production (California Public Utilities Commission 2010{ TC "California Public Utilities Commission 2010" \f C \l "1" }). Subsidence associated with water or gas withdrawal occurs when compressible subsurface deposits are depressurized as a result of removal of water or gas and can no longer support the weight of the overlying material. In the case of groundwater withdrawal, subsidence occurs primarily when groundwater withdrawal from confined aquifers results in the depressurization and dewatering of compressible clay layers. Subsidence generally occurs slowly, and can continue for a period of several years after pumping has stopped as water continues to move out of compressible clay layers.

Subsidence due to groundwater and gas extraction is considered a potential hazard in both Placer and Sutter Counties. Data available from the California Department of Water Resources indicates that the project area is within the North American Groundwater Subbasin of the Sacramento Groundwater Basin, which is considered to have a medium to high potential for future subsidence (California Department of Water Resources 2016{ TC "California Department of Water Resources 2016" \f C \l "1" }); however, the nearest subsidence monitoring stations to the project area have detected only 1 to 1.5 inches of subsidence over the last 10 to 20 years. Groundwater levels in the aquifers underlying the project area are generally at or near historical lows; however, given the limited amount of historical subsidence and the fact that the project itself is not likely to substantially increase water demand in the area, it is not likely the proposed project would experience substantial subsidence.



## **Lateral Spreading**

Lateral spreading is a form of seismic ground failure where the soil near the surface moves laterally toward a slope or free face such as a streambank. Although the potential for lateral spreading exists near streambanks, the likelihood of such failure is expected to be low based on the relatively low probability for strong ground shaking.

## **Erosion**

Erosion is the process by which rocks, soil, and other land materials are abraded or worn away from Earth's surface over time. A soil's susceptibility to erosion varies, and is a function of its texture, structure, topography, amount of vegetative cover, climate, drainage, and human activity. Erosion from water runoff is of particular concern in fine-sandy and silty soils on moderate to steep slopes, especially during high-intensity storm events and in areas that are sparsely vegetated or where the soil structure has been degraded. The project area is primarily flat and the erosion hazard would be low.

## **Liquefaction**

Liquefaction is a phenomenon in which saturated, cohesionless soils, such as sands and silts, temporarily lose their strength and liquefy when subjected to intense and prolonged ground shaking. The sediments most susceptible to liquefaction include fine, uniformly graded, sandy and silty soils that are cohesionless and poorly consolidated. In order to liquefy during earthquake shaking, potentially liquefiable soils must be saturated (i.e., they must occur below the water table). In general, liquefaction hazards are most pronounced within 50 feet of the ground surface. The potential for liquefaction increases with shallower groundwater levels.

Soils potentially susceptible to liquefaction can be found at various locations throughout Placer County, but specific liquefaction hazard areas are not identified in the Placer County General Plan (Placer County 1994, 2013{ TC "Placer County 1994, 2013" \f C \l "1" }). In Sutter County, sandy layers paralleling rivers pose a potentially higher risk of liquefaction if seismic activity were to occur; however, the generally low seismicity of the area makes the potential for liquefaction low (Sutter County 2008{ TC "Sutter County 2008" \f C \l "1" }).

## **Evaluation Methods**

Potential constraints related to geology and soils were evaluated by reviewing the previously completed studies in the project vicinity, and local planning documents.

Potential constraints associated with geology, soils, seismicity, and topography will be evaluated for each of the criteria set forth in Appendix G of the CEQA Guidelines. A constraint was identified if the project would result in any of the following actions.

- Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:



- Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issues by the State Geologist for the area or based on other substantial evidence of a known fault
- Strong seismic ground shaking
- Seismic-related ground failure, including liquefaction
- Landslides
- Result in substantial soil erosion or the loss of topsoil
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature

## Findings

### Alternative 1

The project is a road widening project, and would not place people or structures in an area that could expose people or property to risk of loss, injury, or death. The area is relatively flat and therefore there is no risk of landslides. No sewer or septic facilities are included in the project. The project area is not susceptible to seismic activity.

Soil stability is varied throughout the project corridor and would be assessed in a geotechnical report. No overhead structures or structures requiring footings would be constructed. The specific plans along the project corridor address potential impacts related to soil instability and erosion by implementing a requirement for a geotechnical report, construction best management practices, and SWPPs. A geotechnical report would be required for the project and would include a summary of information from previous studies.

The level of constraints is low and there are no documented sensitive areas and measures to reduce impacts are standard.

### Alternative 2

Alternative 2 would be similar to Alternative 1. The addition of the multi-use path would result in minimal changes to the studies and no new constraints.

## Paleontology

### Setting

The project area is composed primarily of Quaternary Basin deposits (alluvium) which overlie siltstone bedrock, that is generally not exposed in the area. From east to west, the project corridor crosses the Turlock Lake formation, the Riverbank formation, a small area of the Modesto Formation, and Holocene Basin deposits. Dating to approximately 600 thousand years ago, the Turlock Lake Formation is the stratigraphically oldest geologic unit within the project corridor and is exposed in some areas near the City of Roseville. Late Pleistocene Modesto and Riverbank Formation alluvium overlie the Turlock Lake Formation further west along the project corridor. The Modesto Formation consists of loosely consolidated alluvial fan deposits that date to approximately 12-40 ka. The Riverbank Formation dates to approximately 100 thousand years ago in this area, but has been dated to as old as 450 thousand years ago further south in the San Joaquin Valley. Holocene age basin deposits overlie the older Modesto and Riverbank Formations in the western portion of the project area. (Marchand and Allwardt 1981{ TC "Marchand and Allwardt 1981" \f C \l "1" }; Matzen 2007{ TC "Matzen 2007" \f C \l "1" }.)

Quaternary deposits are generally sensitive for paleontological resources. These formations generally include Irvingtonian and Rancholabrean mammal assemblages, which include mammoth and bison fossils, respectively. All three formations are fossil bearing deposits and have high paleontological sensitivity. Vertebrate fossils from the Pleistocene include horses, mammoths, bison, camels, ground sloths, saber-toothed cats, canids, rodents, mustelids, birds, reptiles, and amphibians (Matzen 2007{ TC "Matzen 2007" \f C \l "1" }). Therefore, paleontological resources may be present throughout the project corridor and could be damaged or destroyed if excavation extends into fossil bearing formations.

### Evaluation Methods

The assessment of sensitivity is based on the potential for geologic formations within the project area to contain fossil remains. Artificial fill materials are extremely unlikely to contain fossil materials and therefore are not sensitive. Holocene deposits do not typically contain fossil remains because fossils are more than 10,000 years of age and Holocene deposits are not that old. Pleistocene deposits are generally considered to have high sensitivity, as are formations from earlier periods (Pliocene and Miocene). The depth of anticipated excavation is important because older deposits underlie newer ones.

### Findings

#### Alternative 1

The project corridor crosses potentially fossil bearing deposits. The three specific plans address the potential for significant impacts with measures to stop work in case of discovery and in some cases, conduct field surveys in sensitive areas. For the project, a Paleontological Investigation Report and possibly a Paleontological Evaluation Report will be required. Study would consider not only



geologic deposits, but also the construction and depths of excavation in particular areas. A Paleontological Mitigation Plan may be necessary if sensitive areas may be affected.

The level of constraints is low, because the nature of the project is not anticipated to result in a substantial amount of deep excavation. Additionally, efforts to mitigate impacts are not likely to result in considerable cost or effects on schedule, particularly during the project approval and environmental document phase.

## **Alternative 2**

Alternative 2 would be similar to Alternative 1. The addition of the multi-use path would result in minimal changes to the studies and no new constraints.

# **Hazardous Waste/Materials**

## **Setting**

### **Agricultural Land Uses**

Approximately 75 percent of the project corridor currently is occupied by rural, agricultural land uses. The remainder consist of suburban development as it nears the City of Roseville. Agricultural use properties involve animals and/or the use of agricultural chemicals (including pesticides, insecticides, and herbicides). Runoff from these properties may contain biological matter and agricultural chemicals, which may have flowed on to the project corridor and into drainages.

### **Aerially-Deposited Lead**

Riego Road has been a traffic-bearing road since at least 1950. As a result, aerially deposited lead (ADL) commonly used in vehicles prior to 1986, could be in soils adjacent to the project corridor. Typically, ADL is found in the top 2 feet of material in areas within the road right-of-way. Residual ADL can build up in surface soils and be transmitted into drainages through runoff. It is assumed that the soils along the project right-of-way have been disturbed during previous roadway maintenance and widening, and, as such, it is not expected that a significant build-up of ADL or any other chemical of concern would be present throughout the project area. However, soil should be screened and/or tested for ADL and other residual chemicals before being moved to an offsite location or another parcel.

### **Known Hazardous Materials Sites**

According to a database search of the Department of Toxic Substances Control's EnviroStor site, three sites of potential concern are located within 0.25 mile of the project corridor (California Department of Toxic Substances Control 2020a{ TC " California Department of Toxic Substances Control 2020a" \f C \l "1" }).

An evaluation just south of the project near Watt Avenue involved assessing property used by the McClellan Air Force Base and possible asbestos-containing materials found in the siding of a radio tower. Due to insufficient information, a determination of No Further Action was made by the

Department of Toxic Substances Control on April 8, 2014. The radio building and two electric poles appear to be extant. Although it is unknown if this building contains asbestos or lead-based paint, it is unlikely to be a hazard to the public or environment if not disturbed (California Department of Toxic Substances Control 2020b{ TC " California Department of Toxic Substances Control 2020b" \f C \l "1" }).

The Del Webb Sun City development is located off Fiddymont Road within a 0.25 mile of the project corridor. A report prepared in March of 1994 indicates that, during construction, a hand dug well was located, and that it was partially collapsed with household debris in it. In 1994, soil and groundwater samples indicated contamination from diesel, motor oil, and lead. The groundwater sample contained trace amounts of motor oil and diesel; however, both were below the water quality objective. Subsequent Department of Toxic Substances Control review completed in March 2016, considered the site closed due to the inability to determine the well location and the complete development of the property (State Water Resources Control Board 2020a{ TC " California Department of Toxic Substances Control 2020c" \f C \l "1" }).

An underground storage tank was reported as leaking gasoline at the Shell service station (3998 Foothills Boulevard). Corrective action commenced and the site is considered completed and closed as of September 22, 2010 (State Water Resources Control Board 2020b{ TC " California Department of Toxic Substances Control 2020d" \f C \l "1" }).

### **Pole-mounted Electrical Transformers**

Pole-mounted electrical transformers associated with overhead electrical services are located along the project corridor. It is unknown whether any of these transformers contain PCBs, which are typically associated with pole-mounted transformers.

### **Yellow Pavement Striping**

Yellow pavement striping and markings are located along the entire length of Riego Road. Studies have determined that yellow thermoplastic striping and yellow painted markings may contain elevated concentrations of lead chromate and/or hexavalent chromium depending on the age of the striping (i.e., products manufactured before 2005) and painted markings (i.e., products manufactured before 1997). Testing of traffic stripes should be conducted before removal.

## **Evaluation Methods**

To evaluate constraints associated with hazards and hazardous materials, information was compiled and reviewed from publicly available sources regarding hazardous materials and contamination release sites. Nearby potentially sensitive receptors such as schools and hospitals were identified, as well as active and abandoned gas wells, gas fields, gas pipelines, and nearby airports.

Data regarding known hazardous material use and release sites, cleanup sites, and the locations of local landfills or recovery facilities listed in on-line agency databases within 0.5 mile of the proposed alternatives and treatment plant sites was compiled. This information was obtained from publicly available databases, including the California State Water Resources Control Board GeoTracker website, and the California Department of Toxic Substances Control EnviroStor website. In addition,



the Phase 1 Environmental Site Assessment prepared for Placer Vineyards EIR in May 2000 (Carlton Engineering Inc. 2000{ TC "Carlton Engineering Inc. 2000" \f C \l "1" }) and the Environmental Site and Risk Assessment prepared for the PG&E 406/407 project (Hanover Environmental Services 2008{ TC "Hanover Environmental Services 2008" \f C \l "1" }) were both reviewed.

Potential constraints associated with hazards and hazardous materials were evaluated for each of the significance criteria set forth in Appendix G of the CEQA Guidelines. A constraint was identified if the proposed project would do any of the following.

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment
- Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school
- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5
- Be located within an airport land use plan area or, where such a plan has not been adopted, be within 2 miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan
- Expose people or structures either directly or indirectly to a significant risk of loss, injury, or death involving wildland fires

## Findings

### Alternative 1

There are no known hazardous material sites within the project area, however, the potential for other hazards does exist, including aurally deposited lead, lead-containing paint, and agricultural chemicals in soils. There are also several schools located within 0.5-mile of the project area. An initial site assessment would be required; soil testing may be required to determine the levels of agricultural contaminants to ensure worker safety. Construction best management practices would be employed to reduce the potential for impacts related to the use of hazardous materials, particularly near schools.

The level of constraints is considered low because the potential for hazardous materials releases does not appear to be more than any other roadway widening project. Standard best management practices and compliance with applicable regulations would adequately address the potential.

## **Alternative 2**

Alternative 2 would be similar to Alternative 1. The addition of the multi-use path would result in slightly more disturbance of agricultural areas that may contain contaminated soils, but the level of constraints would remain low.

## **Wildfire**

### **Setting**

There is the potential for wildland fires in the region given the relatively dry summer climate, with hot days and wind; however, the project site is not located in a fire hazard severity zone according to the California Department of Forestry and Fire Protection's fire hazard severity zone map for Placer County (California Department of Forestry and Fire Protection 2007{ TC "California Department of Forestry and Fire Protection 2007" \f C \l "1" }). Some portions of the project area within Sutter County contain Moderate fire hazard severity zones, both north and south of Riego Road/Baseline Road (California Department of Forestry and Fire Protection 2007{ TC "California Department of Forestry and Fire Protection 2007" \f C \l "1" }).

### **Evaluation Methods**

Criteria based on Appendix G of the State CEQA Guidelines were used in the analysis. A constraint was identified if the alternatives are classified as a very high fire hazard severity zone.

### **Findings**

#### **Alternative 1**

The project area is not within a very high fire hazard severity zone and therefore, no impacts related to wildfire hazards would result from the project. There are no constraints.

#### **Alternative 2**

Alternative 2 would be the same as Alternative 1, and there are no constraints.

## **Air Quality**

### **Setting**

The project is within the Sacramento Valley Air Basin. The basin consists of all or part of 10 counties, including Sutter and Placer Counties. The Feather River Air Quality Management District (FRAQMD) has jurisdiction over local air quality in Sutter and Yuba Counties and the Placer County Air Pollution Control District (PCAPCD) has jurisdiction over local air quality in Placer County. These air districts regulate emissions from construction or operation of new facilities and equipment by requiring permits prior to construction to ensure that potential detrimental effects resulting from pollutant emissions are avoided, minimized, or offset.



The project is included in the 2020 Sacramento Area Council of Governments (SACOG) *Metropolitan Transportation Strategy/Sustainable Community Strategy* (MTP/SCS) as projects PLA15100 and PLA15660 (Sacramento Area Council of Governments 2019{ TC "Sacramento Area Council of Governments 2019" \f C \l "1" }).

The air pollutants of concern for the project are ozone, coarse inhalable particulate matter (PM<sub>10</sub>), and fine inhalable particulate matter (PM<sub>2.5</sub>). These are *criteria pollutants*, which means that ambient air quality standards have been established for them. The portion of the project area in Placer County is currently designated as nonattainment (i.e., in violation of the standard) for the state and federal 8-hour ozone standards, federal PM<sub>2.5</sub> standard, and state PM<sub>10</sub> standard. The portion of the project area in Sutter County is designated as nonattainment for the federal 8-hour ozone standard and state PM<sub>10</sub> standard.

## Evaluation Methods

Guidance from PCAPCD and FRAQMD and professional judgment regarding potential effects of construction and operation of similar facilities were used to identify air quality constraints in the alternative project areas. Criteria based on Appendix G of the State CEQA Guidelines were used in the analysis. A constraint was identified if the alternatives would substantially do any of the following.

- Conflict with or obstruct implementation of applicable air quality plan
- Result in a cumulatively consider net increase of pollutants for which the region is nonattainment
- Expose sensitive receptors to substantial pollutant concentrations
- Generate other emissions, such as those leading to odors, that affect a substantial number of people

## Findings

### Alternative 1

The project is included in the 2020 SACOG MTP/SCS. Assuming the project is completed within the period shown in the MTP (2020 for PLA15100 and 2022 for PLA15660), there would be no constraint related to consistency with air quality plans.

Construction of Alternative 1 would generate short-term criteria pollutant emissions, which combined may exceed FRAQMD or PCAPCD thresholds. These effects may require implementation of a fugitive dust control plan and use of exhaust controls on equipment. Early coordination with the applicable air district during the project design phase would be necessary to obtain authorization to construction.

The project is located within a federal PM<sub>2.5</sub> nonattainment area and if FHWA funding is obtained, it would be subject to project-level transportation conformity requirements. The assessment of localized PM<sub>2.5</sub> impacts should be conducted using the U.S. Environmental Protection Agency's (USEPA) *Transportation Conformity Guidance for Quantitative Hot-Spot Analyses in PM<sub>2.5</sub> and PM<sub>10</sub>*

*Nonattainment and Maintenance Areas.* Based on existing traffic volumes and truck percentages, it is unlikely the project will meet USEPA's definition of a project of air quality concern (POAQC). Interagency consultation through SACOG's Project Level Conformity Group (PLCG) is required to confirm this determination.

Sensitive receptors, including residences and a daycare adjacent to Baseline Road/Riego Road, could be exposed to mobile source air toxics (MSAT) and toxic air contaminants (TAC). Given that construction would occur linearly and would not be concentrated in a single location for an extended period of time, there is a low potential that a construction health risk assessment would be necessary. Based on existing traffic volumes, the project is expected to have low potential MSAT effects, per FHWA guidance.

The project is not anticipated to result in objectionable odors affecting a substantial number of people. There would be no constraint.

Because the project is capacity increasing, operational emissions are anticipated to increase. An Air Quality Report (AQR) would be prepared consistent with Caltrans guidance. Operational emissions present a moderate constraint. If FHWA funding is obtained, it is likely the project would be processed under Title 23 USC 327 NEPA Assignment, and would require an Air Quality Conformity Report (AQCA) report for submittal to FHWA for the conformity determination. The AQCA will evaluate and document that regional and project-level conformity requirements related to the project are met.

## **Alternative 2**

Construction impacts would be greater under Alternative 2, which includes the multi-use path adjacent to Riego Road/Baseline Road. Operational impacts would be the same.

## **Noise and Vibration**

### **Setting**

Residential areas, schools, hospitals, churches, and parks are typical examples of noise-sensitive uses. Commercial land uses are generally less sensitive to noise, while industrial areas are often sources of noise. For this reason, most noise regulations include a variety of permissible noise levels that are based on the land use or zoning of both the location where the noise is produced and the location at which it is heard. Permissible noise levels also vary with time of day and activity (construction vs. operation).

Existing-noise sensitive land uses within or adjacent to the project area include low-density residential developments in Sutter and Placer Counties and the suburban neighborhoods in the City of Roseville. Suburban developments in Roseville include soundwalls. In some areas, project construction would occur within 50 feet of an existing residence. The major existing noise sources in the project area are vehicular traffic on SR 99/70 and local roadways, and agricultural practices. There are also several private air strips in the vicinity.



## Evaluation Methods

A reconnaissance-level survey and review of aerial imagery and pertinent literature were the basis for identification of constraints in the alternative project areas. Criteria based on Appendix G of the State CEQA Guidelines were used in the analysis. A constraint was identified if the alternatives would do any of the following.

- Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies
- Generate excessive groundborne vibration or groundborne noise levels
- Expose people residing or working in the project area to excessive noise levels within the vicinity of a private airstrip or public airport

## Findings

### Alternative 1

During construction, equipment such as dozers, scrapers, and graders would contribute to the noise/vibration environment (Federal Highway Administration 2015{ TC "Federal Highway Administration 2015" \f C \l "1" }). This increase would be temporary and construction noise and vibration would occur only during the time periods allowed by applicable codes or variances, or exemption permits would be sought to permit construction outside of permitted hours. If construction activities are permitted outside of exempt time periods, noise levels would be required to meet the applicable code noise level limits for residential land use during the permitted hours. Construction noise constraints are moderate due to the proximity of sensitive receptors to construction activity.

Potential operational sources of noise and vibration in the project area would consist of traffic noise. The widening could move traffic closer to some residences, and adding lanes would also be considered capacity increasing. This increase in traffic noise would be permanent. A noise evaluation presented in a Noise Study Report would identify whether operational noise levels would exceed local noise regulations. Operational noise constraints are considered moderate due to the nature of the project and proximity of sensitive receptors.

There are several private air strips in the vicinity. These do not experience heavy plane traffic and are generally used for agricultural purposes, and because they are located more than a mile from the project area. Therefore, there would be no constraints related to airstrips.

### Alternative 2

Construction impacts would be greater with Alternative 2, because the multi-use path would be constructed south of Riego Road/Baseline Road and construction would occur closer to residences on the south. Operational impacts would be the same as those described under Alternative 1. The level of constraints would be similar to those under Alternative 1.

## Energy and Climate Change

### Setting

The California Global Warming Solutions Act of 2006 (Senate Bill [SB] 32) authorizes the State Air Resources Board to adopt regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas (GHG) emission reductions. SB 743 was adopted in 2013 to integrate and better balance the needs of congestion management, infill development, active transportation, and GHG emissions reduction. SB 375 directs the Air Resources Board to set regional targets for reduction of GHGs. SB 375 requires each metropolitan planning organization (i.e., SACOG) to include a sustainable communities strategy (SCS) in the regional transportation plan that demonstrates how the region will meet GHG reduction targets. As stated previously, the proposed project is listed in the 2020 SACOG MTP/SCS (Sacramento Area Council of Governments 2019{ TC " Sacramento Area Council of Governments 2020" \f C \l "1" }).

### Evaluation Methods

Criteria based on Appendix G of the State CEQA Guidelines were used in the analysis. A constraint was identified if the alternatives would do any of the following.

- Generate greenhouse gas emissions, either directly or indirectly
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases
- Result in wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency

### Findings

#### Alternative 1

Construction activities could result in emissions of GHGs from fuel combustion for mobile heavy-duty diesel and gasoline-powered equipment, delivery trucks, and worker commuter trips. These emissions could exceed regional GHG thresholds or conflict with applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG. Potential minimization measures could include requiring use of alternative fuel (e.g., biodiesel), requiring recycling of construction waste, and imposing idling limits on equipment.

Additional GHG emissions could result from operation of the project because the project would increase capacity, and likely will increase vehicle miles traveled (VMT). These emissions could exceed regional thresholds or conflict with applicable plans, policies, or regulations adopted for the purpose of reducing the emissions of greenhouse gases.

When detailed construction plans and projected traffic volumes are available, a GHG modeling analysis is recommended within the AQR to quantify all GHG emissions anticipated to be generated



by the project, and to identify potential mitigation to avoid, minimize, or compensate for any detrimental effects. Both construction and operational GHG constraints are considered moderate.

### **Alternative 2**

Construction impacts would be greater under Alternative 2, which includes the multi-use path south of Riego Road/Baseline Road. Operational impacts would be the same.

## **Biological Environment**

### **Setting**

The project area is in the Sacramento Valley subregion of the California Floristic Province (Baldwin et al. 2012{ TC "Baldwin et al. 2012" \f C \l "1" }). The topography in the project areas is relatively level and elevations range from approximately 10 to 100 feet above mean sea level. Habitats within the project areas have been substantially altered by agricultural activities and residential land uses. Vegetation communities in the project areas consist primarily of agricultural fields and annual grassland. The western portion of the project area (west of Steelhead Creek) is dominated by rice production and constructed ditches and canals that convey irrigation water and provide drainage for crops. In the eastern portion of the project areas (east of Steelhead Creek), habitat is dominated by annual grassland interspersed with vernal pools, other seasonal wetlands, and intermittent and seasonal waterways.

Perennial waterways in the project area include Steelhead Creek, Curry Creek, and irrigation canals that provide habitat for anadromous fish and other aquatic species.

Although much of the project area has been substantially altered from its native habitat, there remains a large amount of undeveloped land that is known to support special-status plant and wildlife species (or provides potential habitat for these species). In particular, rice fields and their associated system of canals and ditches have become important habitat for the state and federally listed giant garter snake (*Thamnophis gigas*). Other species that may be present within the project area include vernal pool fairy shrimp (*Branchinecta lynchi*), burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), northern harrier (*Circus hudsonius*), white-tailed kite (*Elanus leucurus*), loggerhead shrike (*Lanius ludovicianus*), and some vernal pool plant species. Biological resources are shown in Figure 4.

## **Evaluation Methods**

### **Findings**

#### **Alternative 1**

A database search indicates that 34 special-status species and habitats have the potential to occur in the project area. A habitat assessment study would be required to determine which of these species have the potential to occur within the project area. A wetland delineation would also be required. These studies would be documented in a Natural Environment Study (NES) and an Aquatic

Resources Delineation Report (ARDR). The field studies would focus on area that have not already been examined and permitted as part of the specific plans in the area.

The Sierra Vista Specific Plan project resulted in impact on vernal pool fairy shrimp habitat, wetlands and other waters, and grassland habitat, and the EIR proposed compensatory mitigation to reduce those impacts (Quad Knopf 2006). The Placer Vineyards Specific Plan EIR identified grassland habitat and a variety of wetland types that provide habitat for a variety of species. The 2006 EIR identifies a mitigation strategy that was revised in a 2012 Addendum (Placer County 2012).

The level of resource constraints would be moderate. While formal consultation with the U.S. Fish and Wildlife Service will likely be required, and multiple agencies and regulations will be involved, the overall cost and schedule implications are generally anticipated in these types of projects. Early consultation with agencies will reduce the potential for unanticipated costs and schedule impacts.

## **Alternative 2**

Alternative 2 would be similar to Alternative 1, but the addition of the multi-use path would result in additional area that would need to be analyzed, and additional construction that could result in impacts on biological resources. The same studies would be required and no additional constraints are anticipated.

## **References**

- Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken (eds). 2012. *The Jepson Manual: Vascular Plants of California*, second edition, revised. Berkeley: University of California Press.
- Bryant, W.A., and S. E. Cluett. 1998. Fault number 38b, Concord fault, Concord section, in Quaternary fault and fold database of the United States. U.S. Geological Survey. Available: <http://earthquake.usgs.gov/hazards/qfaults/>. Accessed: April 10, 2020.
- Bryant, W.A., and S. E. Cluett. 2000. Fault number 55a, Hayward fault zone, North Hayward section, in Quaternary fault and fold database of the United States. U.S. Geological Survey. Available: <http://earthquake.usgs.gov/hazards/qfaults/>. Accessed: April 10, 2020.
- Bryant, W.A., and S. E. Cluett. 2002. Fault number 37, Green Valley fault in Quaternary fault and fold database of the United States. U.S. Geological Survey. Available: <http://earthquake.usgs.gov/hazards/qfaults/>. Accessed: April 10, 2020.
- California Department of Conservation. 2004. Available: [http://www.conservation.ca.gov/dlrp/fmmp/Documents/fmmp\\_guide\\_2004.pdf](http://www.conservation.ca.gov/dlrp/fmmp/Documents/fmmp_guide_2004.pdf).
- California Department of Conservation. 2016a. Sutter County Important Farmland 2016. Available: <https://www.conservation.ca.gov/dlrp/fmmp/Pages/Sutter.aspx>. Accessed: April 7, 2020.
- California Department of Conservation. 2016b. Placer County Important Farmland 2016. Available: <https://www.conservation.ca.gov/dlrp/fmmp/Pages/Placer.aspx>. Accessed: April 7, 2020.



- California Department of Conservation, California Geological Survey. 2016. Information Warehouse: Landslides. Available: <http://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=landslides>. Accessed: August 12, 2016.
- California Department of Finance. 2019. Table P-1: State Population Projections 2010-2060. Available: <http://www.dof.ca.gov/Forecasting/Demographics/Projections/>. Accessed: April 11, 2020.
- California Department of Forestry and Fire Protection. 2007. Fire Hazard Severity Zones Maps (Sutter and Placer Counties). Available: [https://osfm.fire.ca.gov/media/6829/fhszl06\\_1\\_map51.pdf](https://osfm.fire.ca.gov/media/6829/fhszl06_1_map51.pdf). Accessed May 21, 2020.
- California Department of Transportation. 2006. *Guidance for Preparers of Growth-Related Indirect Impact Analysis*. Available: [http://www.dot.ca.gov/ser/Growth-related\\_IndirectImpactAnalysis/gri\\_guidance.htm](http://www.dot.ca.gov/ser/Growth-related_IndirectImpactAnalysis/gri_guidance.htm).
- California Department of Water Resources. 2006. *Sacramento River Hydrologic Region, Sacramento Valley Groundwater Basin, North American Subbasin, Groundwater Basin Number: 5-21.64*. January.
- California Department of Water Resources. 2016. Groundwater Information Center Interactive Mapping Application. Available: <https://gis.water.ca.gov/app/gicima/>. Last revised: May 2016. Accessed: August 2, 2016.
- California Geological Survey. 2003. *Earthquake Shaking Potential for California*. Spring 2003. Available: [https://ssc.ca.gov/forms\\_pubs/shaking\\_18x23.pdf](https://ssc.ca.gov/forms_pubs/shaking_18x23.pdf). Accessed: May 20, 2020.
- California Public Utilities Commission. 2010. *Palermo-East Nicolaus 115 kV Transmission Line, Final Mitigated Negative Declaration and Initial Study*. September.
- California State Water Resources Control Board. 2010. 2010 California 303(d) List of Water Quality Limited Segments. Available: [http://www.waterboards.ca.gov/water\\_issues/programs/tmdl/integrated2010.shtml](http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml). Accessed: May 21, 2020.
- Carlton Engineering, Inc. 2000. Phase I Environmental Site Assessment for Placer Vineyards. Placer County, California. May 2000. Available: <https://www.placer.ca.gov/DocumentCenter/View/9976/Appendix-L---Pages-1-through-99-PDF>. Accessed May 21, 2020.
- Central Valley Regional Water Quality Control Board. 2018. *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fifth Edition (Basin Plan)*. May.
- City of Roseville. 2010. *Sierra Vista Specific Plan*. Adopted May 5, 2010. Available: [https://www.roseville.ca.us/government/departments/development\\_services/planning/specific\\_plans\\_planning\\_areas/sierra\\_vista\\_specific\\_plan](https://www.roseville.ca.us/government/departments/development_services/planning/specific_plans_planning_areas/sierra_vista_specific_plan). Accessed: May 19, 2020.
- City of Roseville. 2020. Environmental Utilities-Sewer. Available: <https://www.roseville.ca.us/cms/One.aspx?portalId=7964922&pageId=8908335>. Accessed: May 18, 2020.

- Department of Toxic Substances Control. 2020a. EnviroStor Database. Available: <http://www.envirostor.dtsc.ca.gov/public/map/?myaddress=riego+road%2C+sacramento>. Accessed: April 10, 2020.
- Department of Toxic Substances Control. 2020b. EnviroStor Database. Available: [http://www.envirostor.dtsc.ca.gov/public/profile\\_report?global\\_id=80000011](http://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=80000011). Accessed: April 10, 2020.
- EDAW. 2009. *Sutter Pointe Specific Plan Final Environmental Impact Report*. Approved June 30, 2009. Available: [https://www.suttercounty.org/assets/pdf/cs/ps/measureM/feir/FEIR\\_SutterPointMAY2009.pdf](https://www.suttercounty.org/assets/pdf/cs/ps/measureM/feir/FEIR_SutterPointMAY2009.pdf). Accessed: May 15, 2020.
- EDAW/AECOM. 2014. *Sutter Pointe Specific Plan*. October 28, 2014. Available: [https://www.suttercounty.org/doc/government/depts/ds/ps/cs\\_sutterpointe\\_plan](https://www.suttercounty.org/doc/government/depts/ds/ps/cs_sutterpointe_plan). Accessed: May 19, 2020.
- Federal Highway Administration. 2015. *Construction Noise Handbook*. Updated November 2015. Available: <https://www.fhwa.dot.gov/environment/noise/>. Accessed May 18, 2020.
- Hanover Environmental Services. 2008. *Environmental Site Assessment for PG&E 406/407 Natural Gas Pipeline Project Environmental Impact Report*. June and August 2008. Available: <https://www.slc.ca.gov/ceqa/pg-e-line-406-407-pipeline-project/>. Accessed May 21, 2020.
- Helley, E.J., and D. S. Harwood. 1985. *Geologic map of the Late Cenozoic deposits of the Sacramento Valley and northern Sierran foothills, California*. U.S. Geological Survey Miscellaneous Field Studies Map MF-1790, 1:62,500 scale.
- Kleinfelder. 2008. *Preliminary Geologic and Geotechnical Information Proposed Palermo-Nicolaus Transmission Line Butte, Yuba, and Sutter Counties, California*. September 10.
- Marchand, D.E. and A. Allwardt. 1981. "Late Cenozoic stratigraphic units, northeastern San Joaquin Valley, California." *United States Geological Survey Bulletin 1470*.
- Matzen, Benjamin L. 2007. *Paleontological Survey and Analysis for the Pacific Gas and Electric Company (PG&E) Line 406 and 407 Expansion Project in Yolo, Sutter, Sacramento, and Placer Counties, California*. Prepared by Garcia and Associates, San Anselmo, CA. Prepared for CH2M Hill, Oakland, CA.
- Michael Brandman Associates. 2009. *PG&E Line 406/407 Natural Gas Pipeline Project Revised Final Environmental Impact Report*. October 30, 2009. Available: <https://www.slc.ca.gov/ceqa/pg-e-line-406-407-pipeline-project/>. Accessed: May 15, 2020.
- PBS&J. 2009. Sutter Pointe Specific Plan Figure A1-12. Available: <https://www.suttercounty.org/assets/pdf/cs/ps/gp/documents/12-Sutter%20Pointe%20Specific%20Plan.pdf>. Accessed: May 13, 2020.
- Placer County. 1994. *Placer County General Plan Final Environmental Impact Report*. July.

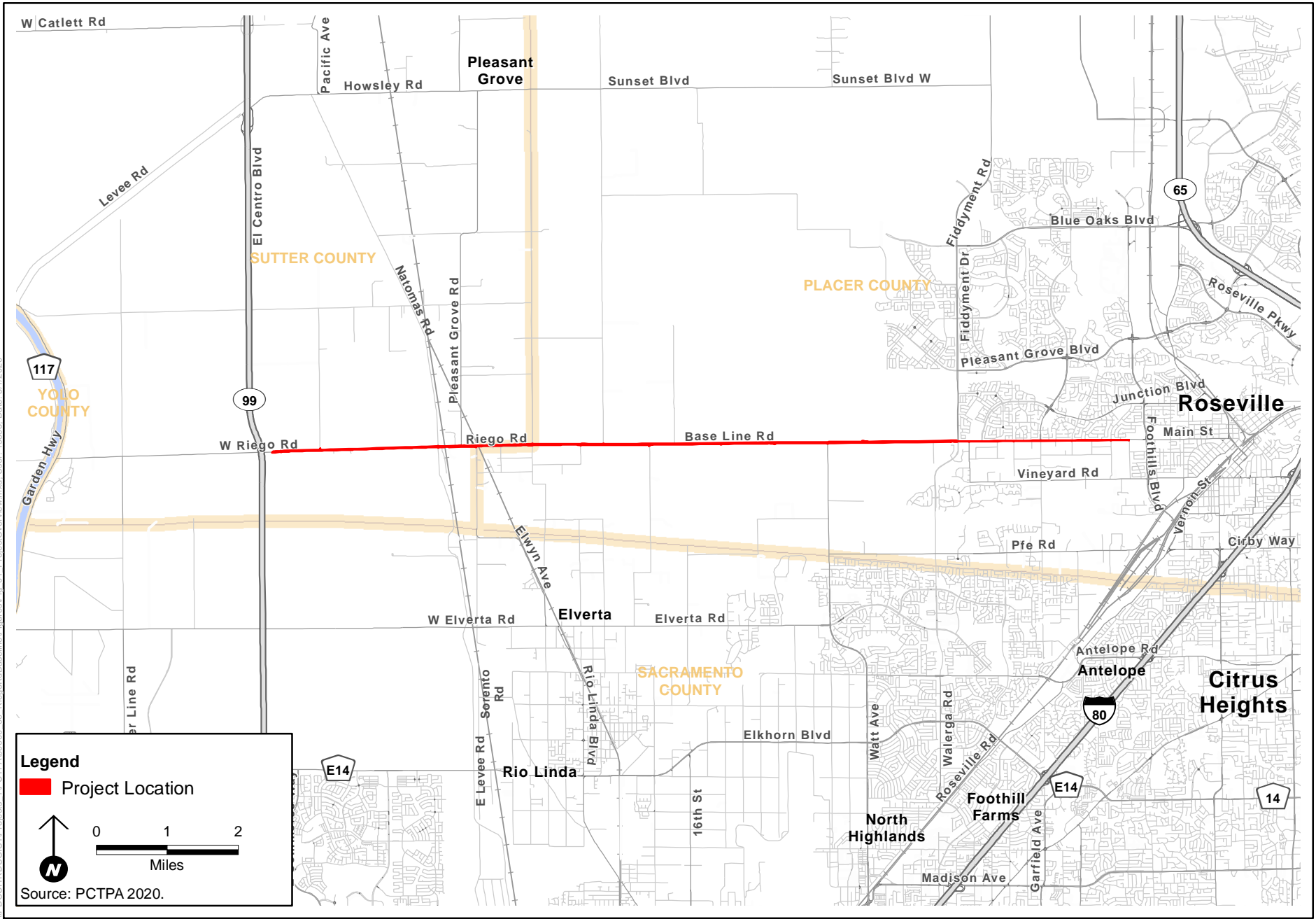


- Placer County. 2012. *Addendum to the Placer Vineyards Specific Plan Certified Environmental Impact Report*. Available: <https://www.placer.ca.gov/DocumentCenter/View/9783/2012-Addendum-to-the-Environmental-Impact-Report-PDF>. Accessed May 21, 2020.
- Placer County. 2013. *Placer County General Plan Land Use and Circulation Element*. Updated May 2013. Available: <https://www.placer.ca.gov/DocumentCenter/View/8572/Land-Use-and-Circulation-PDF>. Accessed: May 13, 2020.
- Placer County. 2015. *Placer Vineyards Specific Plan*. January 2015. Available: <https://www.placer.ca.gov/3601/Plans>. Accessed: May 19, 2020.
- Placer County. 2020. Sewer services locator map. Available: <http://www.placer.ca.gov/sewer>. Accessed: May 18, 2020.
- Quad Knopf. 2006. *Revised Draft Environmental Impact Report for Placer Vineyards Specific Plan, Placer County, California*.
- Sacramento Area Council of Governments (SACOG). 2019. Appendix A: Draft 2020 MTP/SCS Transportation Project List. Available: <https://www.sacog.org/post/adopted-2020-mtpscsc>. Accessed: May 20, 2020.
- State Water Resources Control Board. 2020a. *GeoTracker Search Results*. Available: [https://geotracker.waterboards.ca.gov/profile\\_report?global\\_id=SLT5S1183158](https://geotracker.waterboards.ca.gov/profile_report?global_id=SLT5S1183158). Accessed: April 10, 2020.
- State Water Resources Control Board. 2020b. *GeoTracker Search Results*. Available: [https://geotracker.waterboards.ca.gov/case\\_summary?global\\_id=T0606186564](https://geotracker.waterboards.ca.gov/case_summary?global_id=T0606186564). Accessed: April 10, 2020.
- Sutter County. 2008. *Sutter County General Plan Update Technical Background Report*. February.
- Sutter County. 2020. Department of Environmental Services-Septic System Information. Available: [https://www.suttercounty.org/doc/government/depts/ds/ehs/septic/cs\\_ehs\\_septic\\_system](https://www.suttercounty.org/doc/government/depts/ds/ehs/septic/cs_ehs_septic_system). Accessed: May 18, 2020.
- U.S. Army Corps of Engineers. 2013. *Sierra Vista Specific Plan Final Environmental Impact Statement May 2013*. Available: [https://www.spk.usace.army.mil/Portals/12/documents/regulatory/eis/200601050-FEIS/0\\_1\\_Table\\_of\\_Contents.pdf](https://www.spk.usace.army.mil/Portals/12/documents/regulatory/eis/200601050-FEIS/0_1_Table_of_Contents.pdf). Accessed: May 15, 2020.
- U.S. Army Corps of Engineers. 2014. *Placer Vineyards Specific Plan Final Environmental Impact Statement July 2014*. Available: <https://www.spk.usace.army.mil/portals/12/documents/regulatory/eis/199900737-feis/placervineyardsspecificplanfinaleis.pdf>. Accessed: May 15, 2020.
- U.S. Census Bureau. 2018. 2018 American Community Survey 1-Year Estimates Subject Tables. Available: [https://data.census.gov/cedsci/table?g=0500000US06061,06101\\_1600000US0662938&tid=ACSST1Y2018.S0101&vintage=2018&hidePreview=true&layer=VT\\_2018\\_050\\_00\\_PY\\_D1&cid=S0101\\_C01\\_001E](https://data.census.gov/cedsci/table?g=0500000US06061,06101_1600000US0662938&tid=ACSST1Y2018.S0101&vintage=2018&hidePreview=true&layer=VT_2018_050_00_PY_D1&cid=S0101_C01_001E). Accessed: April 11, 2020.

University of California Davis. 2016. California Soil Resource Lab. Available:  
<http://casoilresource.lawr.ucdavis.edu/soilweb-apps>. Accessed: May 11, 2020.

Western Placer Waste Management Agency. 2020. About WPWMA website. Available:  
<https://www.wpwma.ca.gov/about-wpwma/>. Accessed: May 18, 2020.



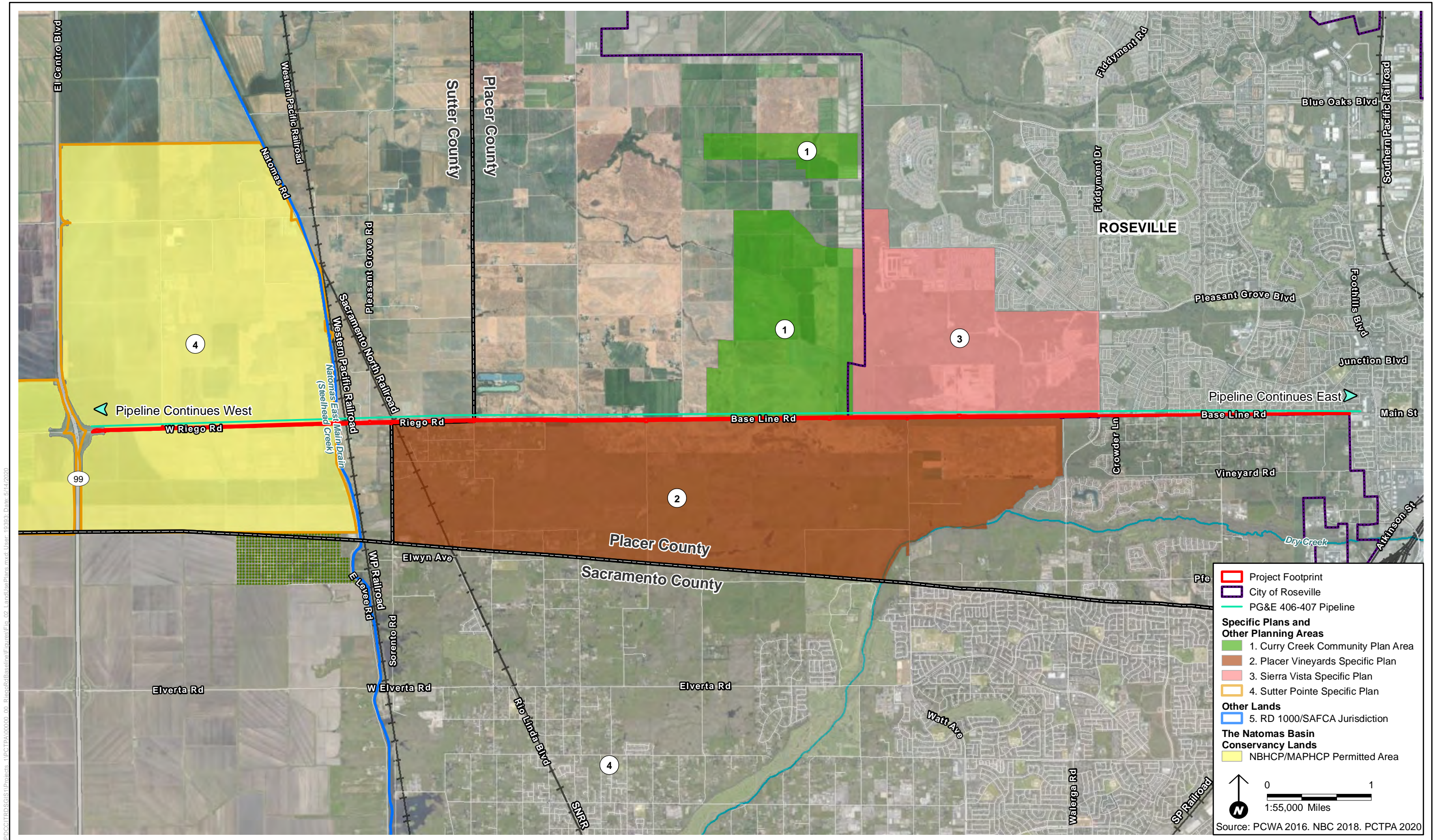


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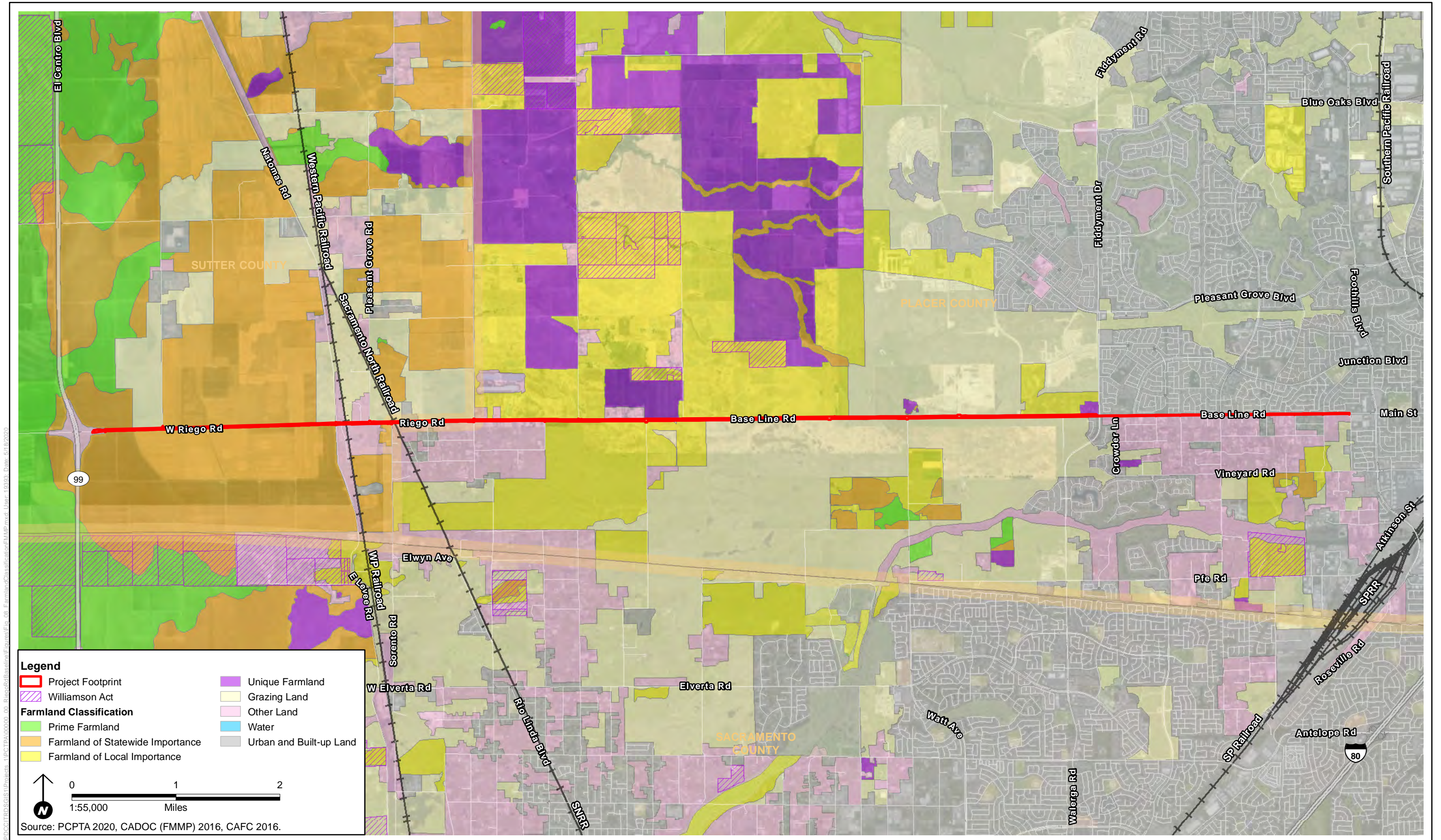
**Figure 1**  
**Riego Road/Baseline Road Project Overview**





**Figure 2**  
**Previous Studies in the Project Area**

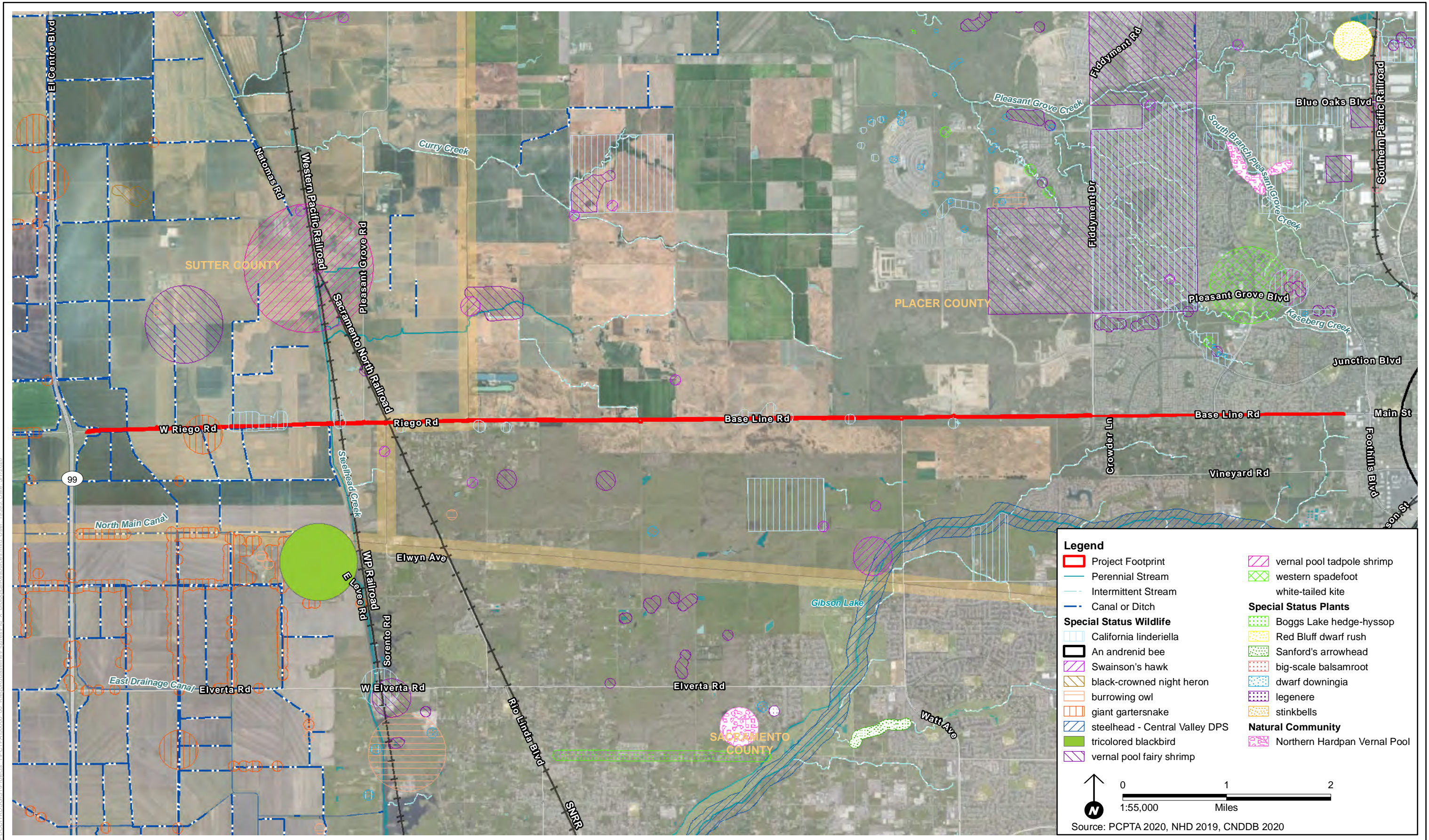




**Figure 3**  
Farmland Classifications in the Project Area



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**Legend**

Project Footprint	vernal pool tadpole shrimp
Perennial Stream	western spadefoot
Intermittent Stream	white-tailed kite
Canal or Ditch	<b>Special Status Plants</b>
<b>Special Status Wildlife</b>	Boggs Lake hedge-hyssop
California linderella	Red Bluff dwarf rush
An andrenid bee	Sanford's arrowhead
Swainson's hawk	big-scale balsamroot
black-crowned night heron	dwarf downingia
burrowing owl	legenera
giant gartersnake	stinkbells
steelhead - Central Valley DPS	<b>Natural Community</b>
tricolored blackbird	Northern Hardpan Vernal Pool
vernal pool fairy shrimp	

0 1 2  
 1:55,000 Miles  
 Source: PCPTA 2020, NHD 2019, CNDDDB 2020



**Figure 4**  
**Biological Resources in the Project Area**



# ATTACHMENT D

## ESTIMATES

**RIEGO ROAD/BASELINE ROAD WIDENING PROJECT  
(PSR EQUIVALENT LEVEL)**

**PRELIMINARY COST ESTIMATE SUMMARY (8/10/2020)**

	<b>Alt 1</b>	<b>Alt 2</b>
Construction	\$64,980,000	\$72,420,000
Contingency (20%)	\$13,000,000	\$14,490,000
Construction costs 2020 subtotal	<u>\$77,980,000</u>	<u>\$86,910,000</u>
Construction costs 2023 (4%/yr escalation)	\$87,730,000	\$97,780,000
Environmental Mitigation (3%)	\$2,530,500	\$2,820,300
ROW Cost (Incl. RR items and Utilities)	\$9,228,000	\$10,075,000
Construction Mgmt (8%)	\$6,748,000	\$7,520,800
Construction Support (2%)	\$1,687,000	\$1,880,200
ROW Support (82 properties)	\$1,425,000	\$1,425,000
PA&ED (5%)	\$4,217,500	\$4,700,500
PS&E (6%)	\$5,061,000	\$5,640,600
Agency Oversight (4%)	\$3,374,000	\$3,760,400
Total=	<u>\$122,010,000</u>	<u>\$135,610,000</u>



**RIEGO ROAD/BASELINE ROAD WIDENING PROJECT**  
**ALTERNATIVE 1 - PRELIMINARY COST ESTIMATE**  
**8/10/2020**

SSP	No.	BID ITEM No.	BID ITEM DESCRIPTION	UNIT OF MEASURE	ESTIMATED QUANTITY	UNIT PRICE	TOTAL AMOUNT
	1	070000A	CONSTRUCTION STAKING	LS	1	\$ 250,000	\$ 250,000
	2	070030	LEAD COMPLIANCE PLAN	LS	1	\$ 5,000	\$ 5,000
	3	080050	PROGRESS SCHEDULE (CRITICAL PATH METHOD)	LS	1	\$ 50,000	\$ 50,000
	4	100100	DEVELOP WATER SUPPLY	LS	1	\$ 250,000	\$ 250,000
	5	100101A	RESIDENT ENGINEERS OFFICE	LS	1	\$ 100,000	\$ 100,000
	6	120090	CONSTRUCTION AREA SIGNS	LS	1	\$ 125,000	\$ 125,000
	7	120100	TRAFFIC CONTROL SYSTEM	LS	1	\$ 500,000	\$ 500,000
	8	120149	TEMPORARY PAVEMENT MARKING	SQFT	330	\$ 4	\$ 1,320
	9	120159	TEMPORARY TRAFFIC STRIPE (PAINT)	LF	132,000	\$ 1	\$ 66,000
	10	128652	PORTABLE CHANGEABLE MESSAGE SIGN	EA	20	\$ 10,000	\$ 200,000
	11	129000	TEMPORARY RAILING (TYPE K)	LF	65,000	\$ 20	\$ 1,300,000
	12	129110	TEMPORARY CRASH CUSHION	EA	20	\$ 2,500	\$ 50,000
	13	130100	JOB SITE MANAGEMENT	LS	1	\$ 250,000	\$ 250,000
	14	130300	WATER POLLUTION CONTROL (SWPPP)	LS	1	\$ 1,500,000	\$ 1,500,000
	15	131201	TEMPORARY CREEK DIVERSION SYSTEM	LS	1	\$ 300,000	\$ 300,000
	16	141101	REMOVE YELLOW PAINTED TRAFFIC STRIPE (HAZARDOUS WASTE)	LF	1,000	\$ 3	\$ 3,000
	17	803020	REMOVE FENCE	LF	46,480	\$ 30	\$ 1,394,400
	18	160120A	REMOVE TREE	EA	90	\$ 1,000	\$ 90,000
	19	170103	CLEARING AND GRUBBING	LS	1	\$ 100,000	\$ 100,000
	20	190101	ROADWAY EXCAVATION (Sutter)	CY	93,759	\$ 20	\$ 1,875,179
	21		ROADWAY EXCAVATION (Placer)	CY	333,556	\$ 20	\$ 6,671,129
	22		ROADWAY EXCAVATION (City)	CY	17,181	\$ 20	\$ 343,618
	23	198010	IMPORT BORROW (Sutter)	CY	74,952	\$ 25	\$ 1,873,804
	24		IMPORT BORROW (Placer)	CY	80,421	\$ 25	\$ 2,010,533
	25	210430	HYDROSEED	SQFT	1,355,625	\$ 0.50	\$ 677,813
	26	210350	FIBER ROLL	LF	180,000	\$ 2.00	\$ 360,000
	27	260203	CLASS 2 AGGREGATE BASE (Sutter)	CY	18,929	\$ 50	\$ 946,451
	28		CLASS 2 AGGREGATE BASE (Placer)	CY	47,730	\$ 50	\$ 2,386,481
	29		CLASS 2 AGGREGATE BASE (City)	CY	1,087	\$ 50	\$ 54,356
	30	260203A	SUBGRADE (Sutter)	CY	14,197	\$ 50	\$ 709,838
	31		SUBGRADE (Placer)	CY	52,069	\$ 50	\$ 2,603,433
	32		SUBGRADE (City)	CY	1,242	\$ 50	\$ 62,121
	33	390132	HOT MIX ASPHALT (TYPE A) (Sutter)	TON	44,854	\$ 130	\$ 5,831,063
	34		HOT MIX ASPHALT (TYPE A) (Placer)	TON	113,134	\$ 130	\$ 14,707,381
	35		HOT MIX ASPHALT (TYPE A) (City)	TON	1,759	\$ 130	\$ 228,674
	36	398200	COLD PLANE ASPHALT CONCRETE PAVEMENT	SQYD	4,085	\$ 10	\$ 40,848
	37	650010	12" REINFORCED CONCRETE PIPE	LF	2,450	\$ 115	\$ 281,750
	38	650316	24" REINFORCED CONCRETE PIPE (CLASS III)	LF	2,500	\$ 125	\$ 312,500
	39	705201	12" CONCRETE FLARED END SECTION	EA	10	\$ 1,350	\$ 13,500
	40	705206	24" CONCRETE FLARED END SECTION	EA	6	\$ 1,610	\$ 9,660
	41	710136	REMOVE PIPE	LF	4,328	\$ 80	\$ 346,240
	42	710150	REMOVE INLET	EA	1	\$ 3,000	\$ 3,000
	43	710212	ADJUST MANHOLE TO GRADE	EA	5	\$ 1,850	\$ 9,250
	44	723060	ROCK SLOPE PROTECTION (CLASS IV)	CY	150	\$ 280	\$ 42,000
	45	731511	MINOR CONCRETE (ISLAND PAVING)	CY	40	\$ 1,200	\$ 48,000
	46	731516	MINOR CONCRETE (DRIVEWAY)	CY	30	\$ 1,000	\$ 30,000
	47	770006A	SIGN (METAL POST)	EA	50	\$ 350	\$ 17,500
	48	782120	RELOCATE MAILBOX	EA	45	\$ 450	\$ 20,250
	49	800001	FENCE (TYPE BW, METAL POST)	LF	45,000	\$ 25	\$ 1,125,000
	50	800052	FENCE (TYPE WM, WOOD POST)	LF	600	\$ 70	\$ 42,000
	51	800701	WOOD FENCE	LF	2,000	\$ 100	\$ 200,000
	52	801360	METAL GATE	EA	10	\$ 5,000	\$ 50,000
	53	803020	REMOVE FENCE	LF	44,100	\$ 5	\$ 220,500
	54	803060	REMOVE GATE	EA	10	\$ 3,000	\$ 30,000
	55	803015	REMOVE WOOD FENCE	LF	2,000	\$ 30	\$ 60,000
	56	820230	REMOVE SIGN	EA	50	\$ 350	\$ 17,500

**RIEGO ROAD/BASELINE ROAD WIDENING PROJECT  
ALTERNATIVE 1 - PRELIMINARY COST ESTIMATE  
8/10/2020**

SSP	No.	BID ITEM No.	BID ITEM DESCRIPTION	UNIT OF MEASURE	ESTIMATED QUANTITY	UNIT PRICE	TOTAL AMOUNT
	57	810230	PAVEMENT MARKER (RETROREFLECTIVE)	EA	7,643	\$ 6	\$ 45,859
	58	820590	RELOCATE ROADSIDE SIGN	EA	50	\$ 235	\$ 11,750
	59	839752	REMOVE GUARDRAIL	LF	500	\$ 10	\$ 5,000
	60	832005	MIDWEST GUARDRAIL SYSTEM	LF	500	\$ 50	\$ 25,000
	61	840501	THERMOPLASTIC TRAFFIC STRIPE	LF	420,745	\$ 1	\$ 504,894
	62	840515	THERMOPLASTIC PAVEMENT MARKING	SQFT	4,802	\$ 5	\$ 24,010
	63	846030	REMOVE THERMOPLASTIC TRAFFIC STRIPE	LF	70,000	\$ 1	\$ 70,000
	64	872133	SIGNAL AND LIGHTING (Pacific Ave)	EA	1	\$ 200,000	\$ 200,000
	65	872133	SIGNAL AND LIGHTING (Natomas Rd)	EA	1	\$ 200,000	\$ 200,000
	66	872133	SIGNAL AND LIGHTING (Pleasant Grove North)	EA	1	\$ 200,000	\$ 200,000
	67	872133	SIGNAL AND LIGHTING (Pleasant Grove South)	EA	1	\$ 200,000	\$ 200,000
	68	872133	SIGNAL AND LIGHTING (locust Rd)	EA	1	\$ 200,000	\$ 200,000
	69	872133	SIGNAL AND LIGHTING (Know Rd)	EA	1	\$ 200,000	\$ 200,000
	70	872133	SIGNAL AND LIGHTING (Future Rd 1)	EA	1	\$ 200,000	\$ 200,000
	71	872133	SIGNAL AND LIGHTING (Future Rd 2)	EA	1	\$ 200,000	\$ 200,000
	72	872133	SIGNAL AND LIGHTING (Watt Ave)	EA	1	\$ 200,000	\$ 200,000
	73	872133	SIGNAL AND LIGHTING (Future Rd 3)	EA	1	\$ 200,000	\$ 200,000
	74	871812	SIGNAL INTERCONNECT	LS	1	\$ 1,600,000	\$ 1,600,000
	75	XXXXXX	CULVERTS	LS	1	\$ 900,000	\$ 900,000
	76	XXXXXX	BRIDGE REPLACEMENT (75' long x 90'wide)	SF	6,750	\$ 450	\$ 3,037,500
	77	XXXXXX	DEMOLITION OF EXISTING BRIDGE	LS	1	\$ 50,000	\$ 50,000
	78	999990	MOBILIZATION (10%)	LS	1	\$ 5,902,011	\$ 5,902,011
			<b>SUBTOTAL BID ITEMS</b>				<b>\$ 64,972,115</b>
			<b>SUBTOTAL BID ITEMS</b>				<b>\$ 64,972,115</b>
			<b>CONTINGENCY (20%)</b>				<b>\$ 12,994,423</b>
			<b>TOTAL BID ITEMS</b>				<b>\$ 77,966,538</b>
			<b>TOTAL CONSTRUCTION COST (2020)</b>				<b>\$ 77,970,000</b>
			<b>TOTAL ESCALATED CONSTRUCTION COST - 4% PER YEAR (2021)</b>				<b>\$ 81,090,000</b>
			<b>TOTAL ESCALATED CONSTRUCTION COST - 4% PER YEAR (2022)</b>				<b>\$ 84,340,000</b>
			<b>TOTAL ESCALATED CONSTRUCTION COST - 4% PER YEAR (2023)</b>				<b>\$ 87,720,000</b>

**RIGHT OF WAY, RAILROAD AND UTILITIES**

1	XXXXXX	ROW (NO RELOCATION ASSISTANCE INCLUDED)		1	\$ 2,228,000	\$ 2,228,000
2	XXXXXX	EASEMENTS	LS	1	\$ 500,000	\$ 500,000
3	XXXXXX	RAILROAD WORK (PANELS, PREEMPTION DETECTION, CONTROLLER, FLAGGING)	LS	1	\$ 2,000,000	\$ 2,000,000
4	XXXXXX	EXISTING AT-GRADE CLOSURE (ASSUMES TWO CLOSURES)	LS	1	\$ 1,000,000	\$ 1,000,000
5	XXXXXX	RELOCATE POWER POLE	EA	50	\$ 50,000	\$ 2,500,000
6	XXXXXX	MISC UTILITIES	LS	1	\$ 1,000,000	\$ 1,000,000
		<b>TOTAL ROW, RR AND UTILITIES COST</b>				<b>\$ 9,228,000</b>



**RIEGO ROAD/BASELINE ROAD WIDENING + MULTI-USE PATH  
ALTERNATIVE 2 - PRELIMINARY COST ESTIMATE (8/10/2020)**

Additional Cost	Amount	Unit Cost	Cost
Path/Trail - HMA	21881	130	\$ 2,844,465.00
Path/Trail - AB	11178	50	\$ 558,888.89
Striping	50300	1	\$ 50,300.00
Signage	LS	1	\$ 50,000.00
Excavation	33533	20	\$ 670,666.67
Addl bridge width (14')	1092	450	\$ 491,400.00
Barrier	100	300	\$ 30,000.00
Fencing	100	100	\$ 10,000.00

<b>Total Additional Cost</b>	<b>\$ 4,705,720.6</b>
------------------------------	-----------------------

Landscape	\$ 2,740,000.00
Alt 1 Cost Alternative 1+Additonal cost+landscape	\$ 64,972,115.2
20% Contingency	\$ 14,483,567.2
Subtotal (2020)	\$ 86,901,402.9
	\$ 90,377,459.07

<b>Alternative 2 Escalated Construction Cost 2022</b>	<b>\$ 94,000,000.00</b>
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# ATTACHMENT E

## RISK REGISTER



RISK REGISTER				Project Name:	Riego Road/Baseline Road Widening - SR 99 to Foothills Boulevard			DIST- EA	N/A	Project Manager	Jose Silva						
Risk Identification							Risk Assessment					Risk Response					
Status	ID #	Type	Category	Title	Risk Statement	Current status/assumptions	Probability	Cost Impact	Cost Score	Time Impact	Time Score	Rationale	Strategy	Response Actions	Risk Owner	Updated	
Active	1	Threat	Construction	Funding	Capital funding unavailable for right of way and construction.	PCTPA currently working with local partners to identify funding.	4-High	8 -High	32	8 -High	32		Accept	Funding strategy is currently being developed.	PCTPA	6/5/2020	
Active	2	Threat	Organizational	Stakeholders	Builders raise objections; developer plans inconsistent with design.	Landscape buffer provides enough space that designs are independent; lane widths are inconsistent.	2-Low	2 -Low	4	4 -Moderate	8		Mitigate	Team to actively work with Stakeholders to gain approval on the design as early as possible.	PCTPA	6/5/2020	
Active	3	Opportunity	Organizational	Outreach	Local communities pose objections.	Residents in the surrounding communities are aware of the planned growth and new developments.	2-Low	2 -Low	4	4 -Moderate	8	Residents may support improvement that reduce congestion. Outreach will be conducted throughout the environmental process.		Conduct public outreach through workshops and focus meetings. Address feasible comments obtained from the community.	PCTPA	6/5/2020	
Active	4	Threat	Environmental	Property Access for Environmental Studies	Inability to gain access to properties to assess with potential environmental resources (biological, cultural, geotechnical, hazardous materials).	Can use existing info and MMs to complete studies prior to construction/after property acquisition to complete PA&ED. Potential mitigation consequences in permitting/ construction.	3-Moderate	1 -Very Low	3	4 -Moderate	12		Accept	Coordinate early with local agencies.	Team	6/5/2020	
Active	5	Threat	Environmental	Inconsistent Environmental Studies	Project studies could generate inconsistencies with existing development studies.		3-Moderate	4 -Moderate	12	8 -High	24		Accept	Coordinate early with local agencies.	Environmental	6/5/2020	
Active	6	Threat	Environmental	Long Regulatory Agency Reviews	Possible additional studies required and/or lengthy consultations with environmental regulatory agencies.	Potential for 2 BAs requiring USFW consultation, consultation with NRCS re farmland, XPI and FOE requiring SHPO consultation.	2-Low	4 -Moderate	8	16 - Very High	32	Early consultation with agencies, including early draft review or in-person meeting to get agency feedback on approach can help ensure this process is completed on time.	Accept	Coordinate early with local agencies and regulatory agencies.	PCTPA	6/5/2020	
Active	7	Threat	Design	Design incomplete	The design is in the conceptual level and will need to be further developed and refined in the PA&ED phase.	Some features proposed in the PID phase may not be feasible and changes to the build alternatives would be required. The design cost, construction cost and project schedule may be impacted.	2-Low	4 -Moderate	8	4 -Moderate	8	Inputs from Stakeholders may result in changes to the proposed improvements.	Accept	Team to actively work with Stakeholders to gain approval on the design as early as possible.	Team	6/5/2020	
Active	8	Threat	ROW	Stakeholders unwilling to dedicate ROW	Stakeholders may not be willing to dedicate ROW needed for roadway.	Currently, this project has received support by builder partners.	3-Moderate	2 -Low	6	4 -Moderate	12		Accept	Local agencies working with builders to stipulate that ROW is to be dedicated for public roadway improvements.	Local Agencies	6/5/2020	
Active	9	Threat	Design	UPRR	UPRR may not approve widening of at-grade crossing; may require grade separation now.	Current design developed in PID phase does not include additional ROW and access roads that would be required to tie in Natomas Road, Pleasant Grove Road N, etc.	4-High	16 - Very High	64	8 -High	32	Early coordination of request and impacts to facilities.	Accept	Coordinate early with UPRR/CPUC in PA&ED and design phase.	Team	6/5/2020	
Active	10	Threat	Design	Incomplete cost estimates	The design is in conceptual level and therefore a complete cost estimate cannot be provided at this point.	The current cost estimates developed in the PID phase does not provide the accuracy needed for budgeting/programming purposes. The construction cost may be impacted.	3-Moderate	2 -Low	6	1 -Very Low	3	More design features will be identified in PA/ED phase as design is further developed.	Accept	As the design is further developed a more accurate and complete cost estimate will be developed. Maintain adequate contingences.	Design Manager	6/5/2020	
Active	11	Threat	ROW	Landowners unwilling to sell	The project will not able to acquire the needed ROW per design plans in a timely manner.	Some property owners may not agree with the acquisition price. The cost to acquire the ROW and schedule may be impacted due to condemnation.	3-Moderate	4 -Moderate	12	4 -Moderate	12	The acquisition price should be compatible to the market price. However disagreement could still occur.	Accept	Define the need for ROW early in the PA&ED phase and communicate with the owners as soon as the ED is complete. Work closely with the City to start the condemnation process early if needed.	Local Agencies	6/5/2020	
Active	12	Threat	ROW	ROW costs	Unanticipated escalation in ROW acquisition cost due to changing market condition.	ROW acquisition is anticipated and the current cost estimate is based on current market condition. Actual costs may increase as the real estate market continue to improve.	3-Moderate	2 -Low	6	2 -Low	6	The ROW acquisition is not expected to be significant as defined in the PID phase.	Accept	Define the need for ROW early in the PA&ED phase and develop a more accurate acquisition cost.	Team	6/5/2020	

RISK REGISTER				Project Name:	Riego Road/Baseline Road Widening - SR 99 to Foothills Boulevard			DIST- EA	N/A	Project Manager	Jose Silva					
Risk Identification							Risk Assessment					Risk Response				
Status	ID #	Type	Category	Title	Risk Statement	Current status/assumptions	Probability	Cost Impact	Cost Score	Time Impact	Time Score	Rationale	Strategy	Response Actions	Risk Owner	Updated
Active	13	Threat	Design	Soundwalls	Noise levels at nearby sensitive receptors will require mitigation such as soundwalls.	Modeling will occur at the time of the DED to determine if mitigation is required.	3-Moderate	8 -High	24	2 -Low	6	Additional environmental analysis can be completed at the DED stage.	Accept	Environmental and Design teams to coordinate early and discuss results.	Team	6/5/2020
Active	14	Threat	ROW	ROW Schedule	CPUC must approve relinquishment of rights which can impact project schedule.		4-High	1 -Very Low	4	4 -Moderate	16	Early coordination of relocation efforts and impacts of facilities.	Accept	Coordinate early with UPRR/CPUC in PA&ED and design phase.	Team	6/5/2020
Active	15	Threat	ROW	Utility Relocation	Potential costs for relocation of PG&E substation and any unknown utility conflicts.	Better identification of utility conflicts will be further developed in the PA&ED and design phases.	4-High	16 - Very High	64	4 -Moderate	16	Early coordination of relocation efforts and impacts of facilities.	Accept	Coordinate early with utility companies in PA&ED and design phase.	Design Manager	6/5/2020
Active	16	Threat	Design	Survey Files	Inaccuracies or incomplete information in the survey file could lead to rework of the design.	Current design developed in PID phase does not include surveys.	2-Low	2 -Low	4	8 -High	16		Mitigate	Verify that the survey file is accurate and complete.	Design Manager	6/5/2020
Active	17	Threat	Environmental	Challenge to EIR	Potential lawsuits may challenge the environmental report, delaying the start of construction or threatening loss of funding.		3-Moderate	2 -Low	6	8 -High	24	Residents in the surrounding communities are aware of the planned growth and new developments, and are likely to support improvements that reduce congestion. Consultant will work with engineers and PCTPA is legally defensible.	Mitigate	Address concerns of stakeholders and public during environmental process.	Environmental	6/5/2020
Active	18	Threat	Construction	Buried Objects	Unanticipated buried man-made objects uncovered during construction require removal and disposal resulting in additional costs.	A plan will be in place to follow in case of a finding.	3-Moderate	2 -Low	4	1 -Very Low	2	Much of the study area has already been surveyed, and it is possible that no buried objects are encountered during construction.	Accept	Include a Supplemental Work item to cover this risk.	PM/RE	6/5/2020
Active	19	Threat	Design	Supplemental EIR	A design change that is outside of the parameters contemplated in the Environmental Document triggers a supplemental EIR which causes a delay due to the public comment period.	Continual agency and stakeholder coordination and reviews to avoid changes after ED approval.	3-Moderate	1 -Very Low	3	4 -Moderate	12		Avoid	Monitor design changes against ED to avoid reassessment of ED unless the opportunity outweighs the threat.	Design Manager	6/5/2020
Active	20	Threat	Environmental	Nesting birds	Nesting birds, protected from harassment under the Migratory Bird Treaty Act, may delay construction during the nesting season.		3-Moderate	1 -Very Low	3	1 -Very Low	3	There are not many trees that have not already been analyzed in the study area. Surveys will be conducted when the environmental document process is initiated.	Mitigate	Schedule contract work to avoid the nesting season or remove nesting habitat before starting work.	PM/RE	6/5/2020
Active	21	Threat	Construction	Hazardous Materials	Hazardous materials encountered during construction will require an on-site storage area and potential additional costs to dispose.		2-Low	2 -Low	4	1 -Very Low	2		Accept	Identify adequate storage space to be provided.	PM/RE	6/5/2020
Active	22	Threat	Environmental	USFW Service Consultation	Formal consultation with US Fish & Wildlife Service will likely be required resulting in cost and schedule impacts.	Multiple agencies and regulations will be involved.	4-High	4 -Moderate	3	4 -Moderate	12	Overall cost and schedule implications are generally anticipated in these types of projects.	Accept	Early consultation with agencies will reduce the potential for unanticipated costs and schedule impacts.	Environmental	7/30/2020



