14. TRANSPORTATION AND CIRCULATION

14.1 INTRODUCTION

The Transportation and Circulation chapter of the EIR discusses the existing transportation and circulation facilities within the project vicinity, as well as applicable policies and guidelines used to evaluate operation of such facilities. Where development of the proposed project would conflict with applicable policies or guidelines, mitigation measures are identified. The information contained within this chapter is primarily based on the Traffic Impact Analysis prepared for the proposed project by KD Anderson & Associates, Inc. (see Appendix K),[1] as well as the Placer County General Plan,[2] the Placer County General Plan EIR,[3] and the *Dry Creek-West Placer Community Plan* (DCWPCP).[4] It should be noted that the Transportation and Circulation Element of the DCWPCP was updated in July of 2011.

14.2 EXISTING ENVIRONMENTAL SETTING

The section below describes the physical and operational characteristics of the existing transportation system within the study area, including the surrounding roadway network, transit, bicycle and pedestrian facilities.

Existing Roadways

The following sections provide a summary of the existing roadways within the project area.

Baseline Road

Baseline Road is a major east-west arterial that connects the City of Roseville with State Route (SR) 70/99 in Sutter County. Within Sutter County, the roadway becomes Riego Road, while east of Foothills Boulevard the roadway becomes Main Street. Baseline Road has two lanes from SR 70/99 to Walerga Road, three lanes (two westbound and one eastbound) from Walerga Road to Brady Lane, and four lanes from Brady Lane to Foothills Boulevard. The posted speed limit on Baseline Road is 45 mph west of Foothills Boulevard

Vineyard Road

Vineyard Road is an east-west, two-lane minor collector that connects Crowder Lane to the City of Roseville. In the City of Roseville, Vineyard Road transitions to a four-lane roadway. The posted speed limit on Vineyard Road is 45 mph in Placer County and 40 mph east of Brady Lane in Roseville.

PFE Road

PFE Road is an east-west rural collector that links Atkinson Street in the City of Roseville with the Watt Avenue intersection in Placer County. The posted speed limit on PFE Road is 45 mph.

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1 KD Anderson & Associates, Inc. *Traffic Impact Analysis for Brady Vineyard Subdivision, Placer County, California.* August 5, 2019.
2 Placer County. *Countywide General Plan Policy Document*. August 1994 (updated May 2013).
3 Placer County. *Countywide General Plan EIR*. July 1994.
4 Placer County. *Dry Creek-West Placer Community Plan.* Amended May 12, 2009.

Walerga Road
Walerga Road is a north-south, two-lane minor arterial (with some four-lane sections) that connects Baseline Road at Fiddyment Road to Sacramento County. The posted speed limit is 45 mph.

Crowder Lane
Crowder Lane is a north-south, two-lane minor collector that connects Vineyard Road and Baseline Road. The posted speed limit on Crowder Lane is 35 mph.

Cook Riolo Road
Cook Riolo Road is a north-south two-lane rural collector that connects PFE Road and Baseline Road. North of Baseline Road, in the City of Roseville, the roadway becomes Woodcreek Oaks Boulevard. The posted speed limit on Cook Riolo Road is 35 mph.

Brady Lane
Brady Lane is a two-lane local road that links Vineyard Road and Baseline Road near the easterly limits of the DCWPCP. The posted speed limit on Brady Lane is 40 mph.

Antelope Road
Antelope Road is a north-south, two-lane rural collector that connects PFE Road to Sacramento County. Between PFE Road and Poker Lane in the DCWPCP area, Antelope Road is a two-lane roadway, and the roadway transitions to a four-lane roadway in Sacramento County. Within Placer County, the roadway does not include a posted speed limit; therefore, the speed limit is 55 mph under the maximum speed law in the California Vehicle Code.

Foothills Boulevard
Foothills Boulevard is a major arterial street through the City of Roseville and Placer County. Foothills Boulevard originates at the Roseville Road/Cirby Way intersection and continues northerly through the study area to Blue Oaks Boulevard. The posted speed limit on Foothills Boulevard is 45 mph in the study area.

Existing Intersections
The following sections provide a summary of the existing intersections within the project area.

Baseline Road / Walerga Road / Fiddyment Road
The Baseline Road/Walerga Road/Fiddyment Road intersection is located within the City of Roseville and is controlled by an actuated traffic signal that operates with protected left-turn movements on all approaches. The north, south and westbound approaches include a left-turn lane, two through lanes and a right-turn lane. The eastbound approach includes a left-turn lane, a through lane and a shared through-right lane. Crosswalks are striped across each leg of the intersection.

Baseline Road / Cook Riolo Road – Woodcreek Oaks Boulevard
The Baseline Road/Cook Riolo Road – Woodcreek Oaks Boulevard intersection is a Roseville intersection controlled by an actuated traffic signal that operates with protected left-turn movements along the east and west approaches. The northbound and southbound approaches operate under a split phase configuration. The north and southbound approaches include a shared through-left lane and a right-turn lane. The eastbound approach includes a left-turn lane

and a shared through-right lane while the westbound approach includes a left-turn lane, two through lanes and a right-turn lane. Crosswalks are striped across the south, east and north legs of the intersection.

Baseline Road / Brady Lane

The Baseline Road/Brady Lane intersection is a Roseville intersection and a "tee" controlled by a stop sign on the northbound Brady Lane approach. A continuous Two-Way Left-Turn (TWLT) lane exists on Baseline Road. The westbound Baseline Road approach has two through travel lanes; the other approaches are single lanes.

Baseline Road / Foothills Boulevard

The Baseline Road/Foothills Boulevard intersection is in Roseville and is controlled by an actuated traffic signal. Each Foothills Boulevard approach has three through travel lanes, dual left-turn lanes and separate right-turn lanes. The Baseline Road approaches have two through lanes, single left-turn lanes and separate right-turn lanes.

Vineyard Road / Crowder Lane

The Vineyard Road/Crowder Lane intersection is a "tee" controlled by an all-way stop. Each approach is a single travel lane.

Cook Riolo Road / Vineyard Road

The Cook Riolo Road/Vineyard Road intersection is currently controlled by stop signs on all approaches. The intersection is a four-way intersection. All approaches to the intersection are single lanes and there are no crosswalks at this intersection.

Vineyard Road / Brady Lane

The Vineyard Road/Brady Lane intersection is controlled by an all-way stop. Each approach has a single travel lane, and the south leg is private access to two residences.

Vineyard Road / Foothills Boulevard

The Vineyard Road/Foothills Boulevard intersection is a Roseville intersection controlled by an actuated traffic signal. Each Foothills Boulevard approach has three through travel lanes and separate left-turn lanes. A separate right-turn lane exists on the northbound approach. The eastbound Baseline Road approach has two through lanes, a single left-turn lane and separate right-turn lane. The westbound approach has dual left-turn lanes, and single through and right-turn lanes.

Cook Riolo Road / Creekview Ranch School

The Cook Riolo Road/Creekview Ranch School (CRS) intersection is controlled by an actuated traffic signal that operates with protected left-turn movements on the north and south approaches and split phase movements along the east and west approaches. The northbound approach includes separate left, through and right-turn lanes while the southbound approach includes a left-turn lane and a through-right lane. The eastbound approach includes a single lane driveway while the westbound approach includes a through-left lane and a right-turn lane. The northbound right-turn lane includes an overlap phase with the westbound green phase, and a similar overlap exists on the westbound approach. Crosswalks are striped across the north, east and west legs of the intersection.

PFE Road / Walerga Road

The PFE Road/Walerga Road intersection is controlled by an actuated traffic signal that operates with protected left-turn movements on all approaches. Today each approach to the intersection includes a left-turn lane and a through-right lane. Placer County is currently in the process of completing an intersection improvement project that will add a through lane in each direction on Walerga Road. In addition, separate right-turn lanes will be constructed on the southbound and eastbound approaches and the two-lane westbound approach will be reconfigured to allow left turns from the through/right-turn lane under split phase operation. Crosswalks are striped across each leg of the intersection. The aforementioned improvements have been assumed to be in place under cumulative conditions.

PFE Road / Cook Riolo Road

The PFE Road/Cook Riolo Road intersection is currently controlled by stop signs on all approaches. The intersection is a four-way intersection. All approaches to the intersection are single lanes and there are crosswalks across the south, east and west legs. A multi-use pathway is also present along the west side of Cook Riolo Road, from PFE Road to the CRS intersection.

PFE Road / Antelope Road

The PFE Road/Antelope Road intersection is a "tee" intersection and is currently controlled by stop signs on all approaches. The northbound approach to the intersection is a single lane while the westbound approach includes a left-turn lane and a through lane; the eastbound approach includes a right-turn lane and a through lane. The intersection does not include crosswalks.

Freeway Interchanges

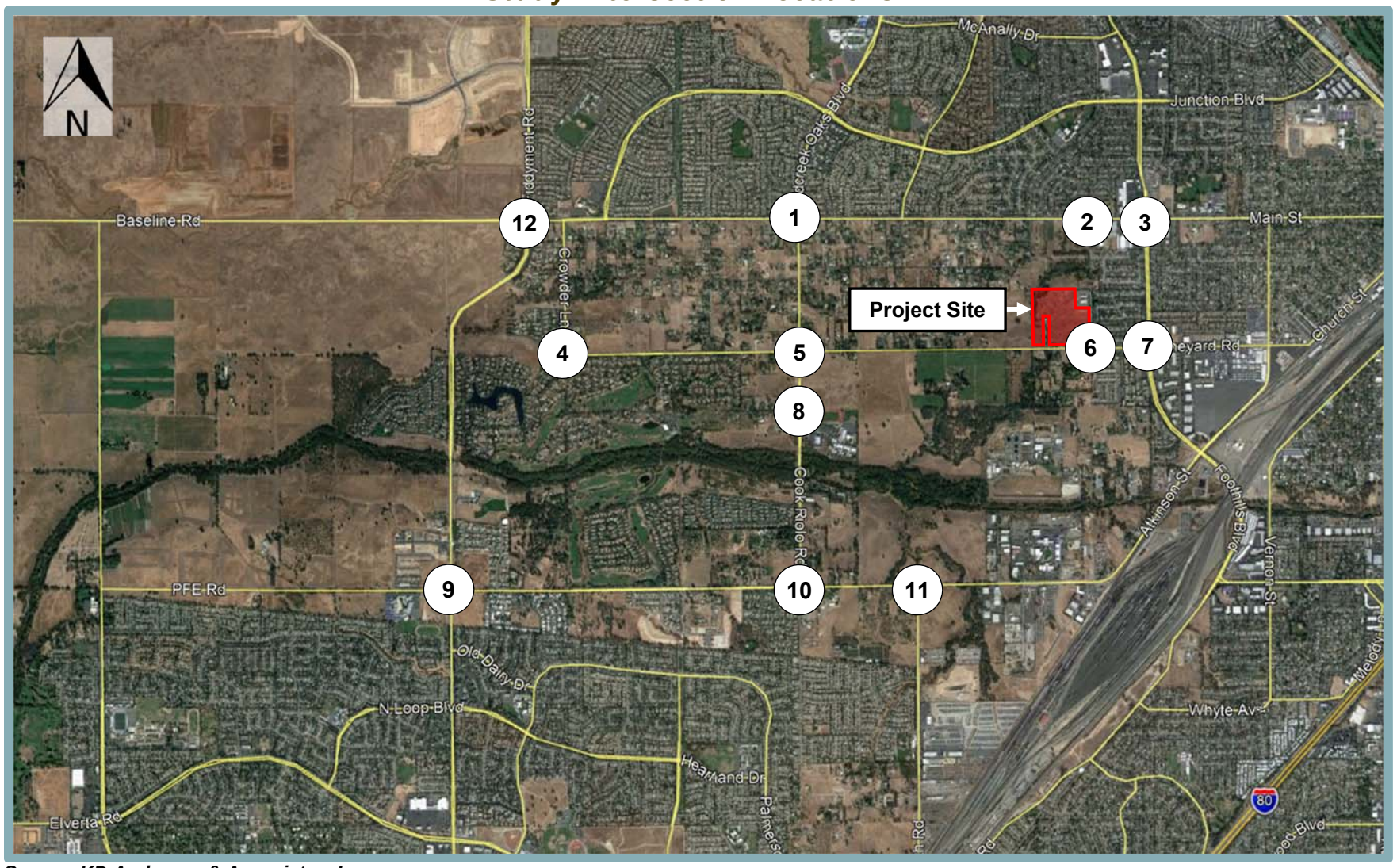
During the Notice of Preparation response period for the proposed project, Caltrans District 3 expressed initial concern regarding the project's potential impact to State highways, particularly with regards to interchanges on SR 65 and I-80. To address such concerns, the volume of project traffic added to regional facilities was estimated using the "select link" function of the regional travel demand forecasting model employed for this analysis. The "select link" function isolated trips generated by residential uses in the project area and determined the share of project traffic at interchanges on I-80 and on SR 65. The results indicated very small traffic volume contributions at these locations, which did not warrant additional analysis. This information was shared with Caltrans District 3, which subsequently withdrew their request for any analysis of conditions/impacts to State facilities. Therefore, freeway interchanges were not analyzed in the Traffic Impact Analysis prepared for the project.

Study Intersections

The following study intersections are analyzed in the Traffic Impact Analysis (see Figure 14-1):

1. Baseline Road/Cook Riolo Road/Woodcreek Oaks Boulevard (Roseville);
2. Baseline Road/Brady Lane (Roseville);
3. Baseline Road/Foothills Boulevard (Roseville);
4. Vineyard Road/Crowder Lane;
5. Cook Riolo Road/Vineyard Road;
6. Vineyard Road/Brady Lane;
7. Vineyard Road/Foothills Boulevard (Roseville);
8. Cook Riolo Road/Creekview Ranch School Access;
9. PFE Road/Walerga Road;
10. PFE Road/Cook Riolo Road;

Figure 14-1
Study Intersection Locations



Source: KD Anderson & Associates, Inc.

11. PFE Road/Antelope Road; and
12. Baseline Road/Walerga Road/Fiddyment Road (Roseville).

Study Roadway Segments

The operation of study area roadways under Placer County's jurisdiction was addressed quantitatively. Because roadway segment LOS is not a significance criterion under City of Roseville guidelines, segments of arterial roadways under Roseville jurisdiction were not evaluated. The following study roadway segments are analyzed in the Traffic Impact Analysis:

1. PFE Road from Walerga Road to Cook Riolo Road;
2. PFE Road from Cook Riolo Road to Antelope Road;
3. Cook Riolo Road from Baseline Road to Vineyard Road;
4. Cook Riolo Road from Vineyard Road to Creekview Ranch School;
5. Cook Riolo Road from Creekview Ranch School to PFE Road;
6. Antelope Road from PFE Road to Great Valley Drive;
7. Vineyard Road from Crowder Lane to Cook Riolo Road;
8. Vineyard Road from Cook Riolo Road to Brady Lane;
9. Vineyard Road from Brady Lane to Foothills Boulevard; and
10. Brady Lane from Baseline Road to PFE Road.

Common Traffic Analysis Terms

Level of Service (LOS) is a qualitative measure of traffic operating conditions, whereby a letter grade, from A to F is assigned, based on quantitative measurements of delay per vehicle. The grades represent the perspective of drivers and are an indication of the comfort and convenience associated with driving. In general, LOS A represents free-flow conditions, and LOS F represents severe delay under stop-and-go conditions. Table 14-1 summarizes the general characteristics associated with each LOS grade.

Table 14-1
Level of Service (LOS) Definitions

LOS	Signalized Intersections	Unsignalized Intersections	Roadway Segments
A	Uncongested operations, all queues clear in a single-signal cycle. Delay ≤ 10 sec/veh	Little or no delay. Delay ≤ 10 sec/veh	Completely free flow.
B	Uncongested operations, all queues clear in a single cycle. Delay > 10 sec/veh and ≤ 25 sec/veh	Short traffic delays. Delay > 10 sec/veh and ≤ 15 sec/veh	Free flow, presence of other vehicles noticeable.
C	Light congestion, occasional backups on critical approaches. Delay > 25 sec/veh and ≤ 35 sec/veh	Average traffic delays. Delay > 15 sec/veh and ≤ 25 sec/veh	Ability to maneuver and select operating speed affected.
D	Significant congestions of critical approaches but intersection functional. Cars required to wait through more than one cycle during short peaks. No long queues formed. Delay > 35 sec/veh and ≤ 55 sec/veh	Long traffic delays. Delay > 25 sec/veh and ≤ 35 sec/veh	Unstable flow, speeds and ability to maneuver restricted.

(Continued on next page)

Table 14-1
Level of Service (LOS) Definitions

LOS	Signalized Intersections	Unsignalized Intersections	Roadway Segments
E	Severe congestion with some long-standing queues on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements. Traffic queue may block nearby intersection(s) upstream of critical approach(es). Delay > 55 sec/veh and ≤ 80 sec/veh	Very long traffic delays, failure, extreme congestion. Delay > 35 sec/veh and ≤ 50 sec/veh	At or near capacity, flow quite unstable.
F	Total breakdown, stop-and-go operation. Delay > 80 sec/veh	Intersection often blocked by external causes. Delay > 50 sec/veh	Forced flow, breakdown.

Source: KD Anderson & Associates, Inc., 2018.

The quality of traffic flow on Placer County roadway segments is determined based on the daily traffic volumes and generalized LOS thresholds. The Placer County General Plan EIR includes daily traffic volume thresholds that may be used to identify general operating LOS on County streets and highways. The Placer County volume thresholds are summarized in Table 14-2 below.

Table 14-2
Placer County Evaluation Criteria for Roadway Segment LOS

Roadway Capacity Class	Maximum Daily Traffic Volume Per Lane				
	LOS A	LOS B	LOS C	LOS D	LOS E
Freeway – Level Terrain	6,300	10,620	13,680	17,740	18,000
Freeway – Rolling Terrain	5,290	8,920	11,650	14,070	15,120
Freeway – Mountainous Terrain	3,400	5,740	7,490	9,040	9,720
Arterial – High Access Control	6,000	7,000	8,000	9,000	10,000
Arterial – Moderate Access Control	5,400	6,300	7,200	8,100	9,000
Arterial – Low Access Control	4,500	5,250	6,000	6,870	7,500
Rural Two-lane Highway – Level Terrain	1,500	2,950	4,800	7,750	12,500
Rural Two-lane highway – Rolling Terrain	800	2,100	3,800	5,700	10,500
Rural Two-lane highway – Mountainous Terrain	400	1,200	2,100	3,400	7,000

Source: KD Anderson & Associates, Inc., 2018.

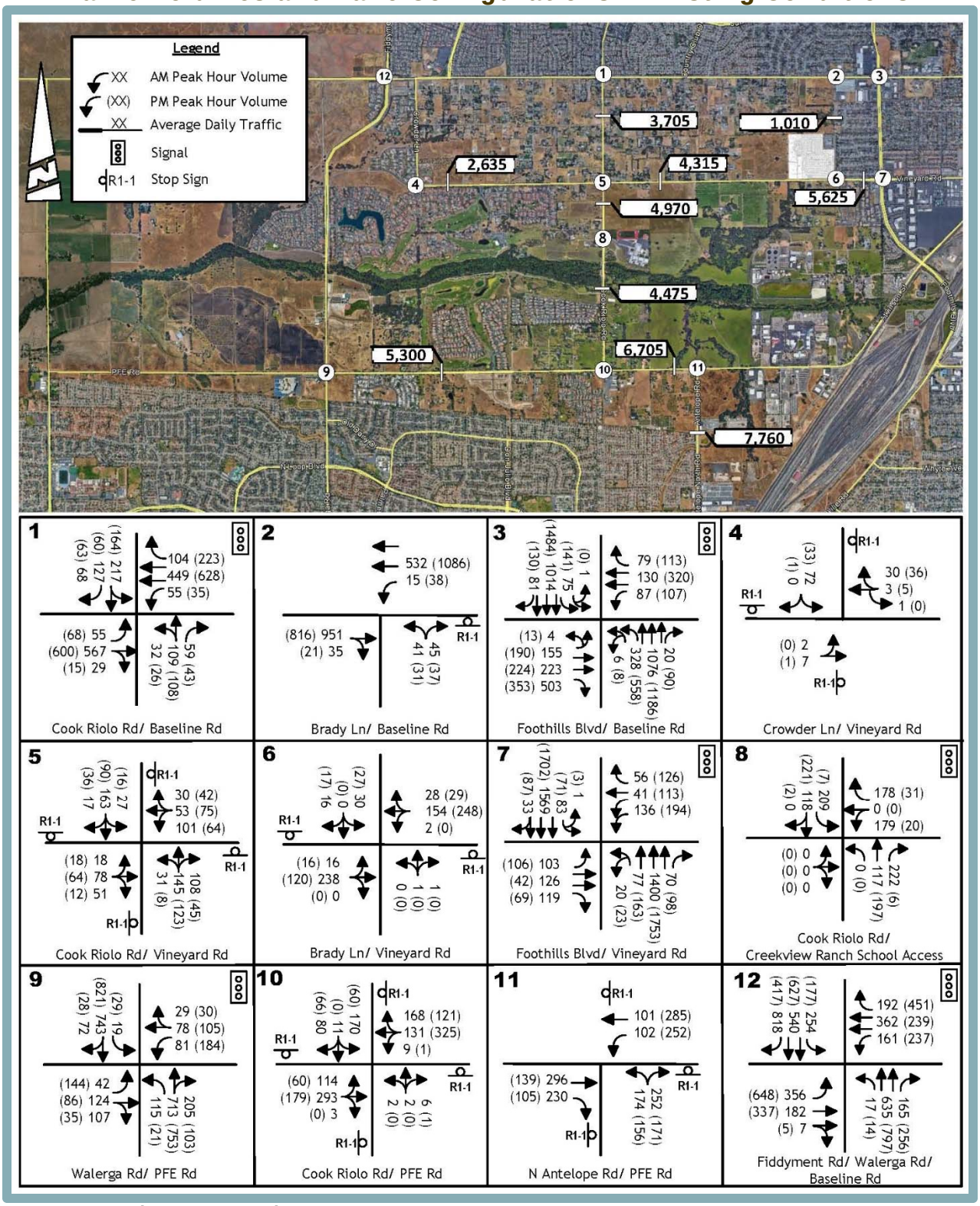
Intersection LOS – Existing Conditions

New AM and PM peak hour intersection turning movement counts were conducted for this analysis on October 17, 2018, when area schools were in session, with the exception of the traffic volume counts for the Baseline Road/Walerga Road/Fiddyment Road intersection, which were collected on April 2, 2019.

Figure 14-2 presents the existing lane configurations at the study intersections, as well as the observed peak hour traffic volumes at each study intersection. The study intersection LOS results are summarized in Table 14-3 for the AM and PM peak hours. As shown in the table, all study intersections currently operate acceptably, with the exception of the following intersections:

3. The City of Roseville's Baseline Road/Foothills Boulevard intersection operates at LOS D in the PM peak hour, which exceeds the City's minimum LOS C goal.

Figure 14-2
Traffic Volumes and Lane Configurations – Existing Conditions



Source: KD Anderson & Associates, Inc.

Table 14-3
Intersection LOS – Existing Conditions

Location - Jurisdiction	Control	AM Peak Hour		PM Peak Hour		Traffic Signal Warranted?
		LOS	Average Delay (veh/sec)	LOS	Average Delay (veh/sec)	
1. Baseline Rd/Cook Riolo Rd/Woodcreek Oaks Blvd (R)	Signal	C	32.0	C	30.5	N/A
2. Baseline Rd/Brady Lane (R) Northbound approach Westbound left turn	NB Stop	 C B	 24.5 10.5	 C A	 21.5 10.0	Yes (AM)
3. Baseline Rd/Foothills Blvd (R)	Signal	C	32.0	**D**	**40.5**	N/A
4. Vineyard Rd/Crowder Ln (overall)* Southbound approach Eastbound left turn	SB Stop	 (A) A A	 (9.0) 9.0 7.5	 (A) A A	 (9.0) 9.0 0.0	No
5. Cook Riolo Rd/Vineyard Rd	AWS	B	13.5	B	11.0	No
6. Vineyard Rd/Brady Ln	AWS	A	9.0	A	9.0	No
7. Vineyard Rd/Foothills Blvd (R)	Signal	C	24.0	C	28.0	N/A
8. Cook Riolo Rd/Creekview Ranch School	Signal	B	12.0	A	6.0	N/A
9. PFE Rd/Walerga Rd	Signal	D	36.0	**E**	**71.0**	N/A
10. PFE Rd/Cook Riolo Rd	AWS	D	28.0	B	14.0	Yes
11. PFE Rd/Antelope Rd	AWS	C	17.5	C	15.5	Yes
12. Baseline Rd/Walerga Rd/Fiddyment Rd (R)	Signal	**D**	**40.0**	**F**	**81.0**	N/A

Notes:
- (R) indicates City of Roseville jurisdiction. Minimum LOS C standard applies.
- **Bold** indicates minimum LOS threshold exceeded.

* Overall Average Delay = Σ (Delay x Volume of each delayed movement) / Σ Volume of each delayed movement.

Source: KD Anderson & Associates, Inc.

9. The PFE Road/Walerga Road intersection operates at LOS E in the PM peak hour. While LOS E exceeds the County's minimum LOS D standard, the DCWPCP ultimately accepts LOS F at this location once improvements have been fully constructed. Placer County has a CIP funded project to widen the intersection and deliver a four-lane Walerga Road at the intersection. The improvement is being designed by a private development project but has not yet been constructed.
12. The City of Roseville's Baseline Road/Walerga Road-Fiddyment Road intersection operates at LOS D in the AM peak hour and LOS F in the PM peak hour, both of which exceeds the City's minimum LOS C goal.

The Cook Riolo Road/Creekview Ranch School intersection operates at LOS B in the AM peak hour and LOS A in the PM peak hour. While conditions at the intersection would be considered acceptable based on HCM LOS calculation methods, in actuality, appreciable delays occur during the peak periods of school traffic within the overall AM peak hour. At that time the school circulation system's internal capacity for on-site curbside drop-off is exceeded by the actual arriving vehicle demand, and traffic waiting to use the drop-off zones can create queueing that extends onto Cook Riolo Road. The Dry Creek School District completed a project to add a new parking lot with additional on-site drop-off space, and while conditions in 2019 are better than before, some queueing onto Cook Riolo Road remains during the school's morning drop-off and afternoon loading periods. It should be noted that Placer County does not recognize this intersection as being regionally significant and, therefore, does not apply the County's LOS standard to this intersection. Given that the Creekview Ranch School access is used primarily by traffic generated by the school, the information regarding this location is presented for informational purposes only.

Roadway LOS – Existing Conditions

New roadway 24-hr traffic counts were conducted for this analysis on October 18, 2018 when area schools were in session. Table 14-4 summarizes the LOS at the study roadway segments based on the current daily traffic volumes on study area roads with the existing roadway configuration. Applicable LOS thresholds and roadway classifications are presented in the table. For the purpose of this analysis, LOS D is the minimum acceptable condition unless specifically accepted by the DCWPCP after planned future improvements have been made (see the Standards of Significance section below for exceptions). As shown in the table, all the study roadway segments currently operate within accepted Placer County DCWPCP minimum thresholds.

Pedestrian, Bicycle and Transit Facilities

The sections below describe the existing pedestrian, bicycle and transit facilities located within the vicinity of the project site. As shown in Figure 14-3, the facilities are primarily limited to locations where frontage roadway improvements have been completed as a result of development.

Sidewalks and Paths

Currently, sidewalks exist on the north side of Baseline Road and on the south side of the road east of Brady Lane. In addition, sidewalks exist on both sides of Chignahuapan Way between Brady Lane and Foothills Boulevard. Sidewalks or paths are provided along Vineyard Road at the following locations:

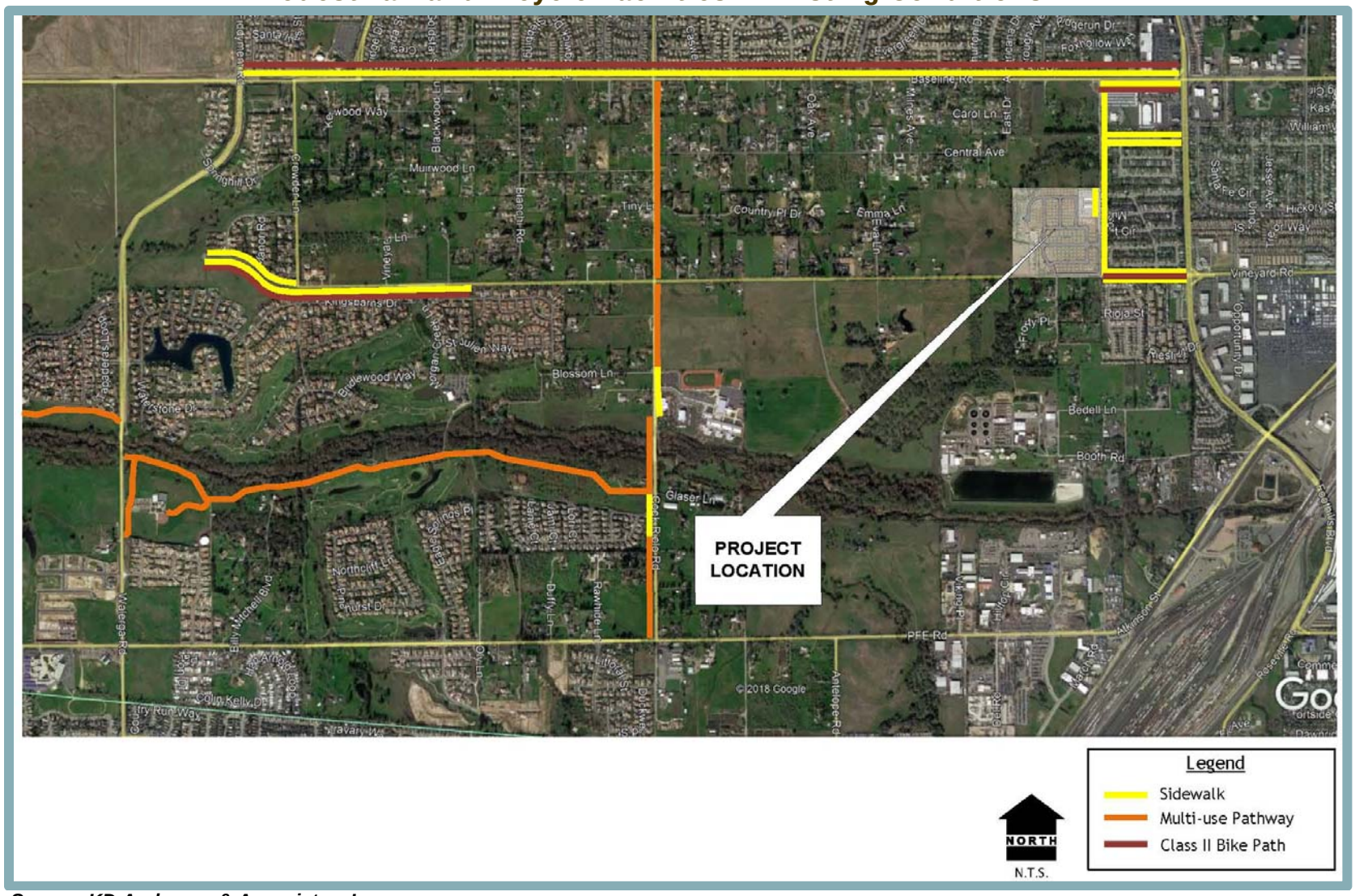
Table 14-4
Roadway Segment LOS – Existing Conditions

Roadway	Location	Number of Lanes – Facility Classification	Standard		Daily Volume/LOS		
					Existing		
			LOS	Volume Threshold Per Lane (veh/ln)	Daily Volume	V/C	LOS
1. PFE Road	Walerga Rd to Cook Riolo Rd	2-lane Level Terrain Rural Highway	D	7,750	5,300	0.21	B
2. PFE Road	Cook Riolo Rd to Antelope Rd	2-lane Rolling Terrain Rural Highway	D	5,700	6,705	0.32	C
3. Cook Riolo Road	Baseline Rd to Vineyard Rd		D	5,700	3,705	0.18	B
4. Cook Riolo Road	Vineyard Rd to Creekview Ranch School		D	5,700	4,970	0.24	C
5. Cook Riolo Road	Creekview Ranch School to PFE Rd		D	5,700	4,475	0.21	C
6. Antelope Road	PFE Rd to Great Valley Dr		D	5,700	7,760	0.37	D
7. Vineyard Road	Crowder Ln to Cook Riolo Rd		D	5,700	2,635	0.13	B
8. Vineyard Road	Cook Riolo Rd to Brady Ln		D	5,700	4,315	0.21	C
9. Vineyard Road	Brady Ln to Foothills Blvd (R)	2-lane Arterial – Low Access Control	D	6,875	5,625	0.38	A
10.Brady Lane	Baseline Rd to Project (R)	2-lane Rolling Terrain Rural Highway	D	5,700	1,010	0.05	A
11.Brady Lane	Project to Vineyard Rd (R)		D	5,700	1,010	0.05	A

Notes:
- **Bold** values exceed minimum LOS threshold.
- **Highlighted** values are a significant impact.
- (R) is City of Roseville jurisdiction.

Source: KD Anderson & Associates, Inc.

Figure 14-3
Pedestrian and Bicycle Facilities – Existing Conditions



Source: KD Anderson & Associates, Inc.

- West of Crowder Lane;
- Separated path on south side from Crowder Lane to 0.5-mile west of Cook Riolo Road;
- East of Brady Lane.

Along Cook Riolo Road, a multi-use pathway is available on the west side of the road for pedestrians and bicyclists from PFE Road to Creekview Ranch School. A Placer County project to construct a multi-use trail on the east side of Cook Riolo Road from Creekview Ranch School to Baseline Road was completed in the summer of 2018. Sidewalks are also present along the school frontage. To the northeast of the site, a sidewalk is provided along the east side of Brady Lane between Vineyard Road and Mercedes Place, and on a local street that joins Brady Lane and Foothills Boulevard.

Bicycle Facilities and Trails

The Placer County Regional Bikeway Plan provides information regarding the regional system of bikeways for transportation and recreation purposes. The regional bikeway plan was approved by the Placer County Transportation Planning Agency (PCTPA) Board in 2018 and subsequently adopted by the Placer County Board of Supervisors. The Placer County Regional Bikeway Plan includes the following system classifications:

- Class I Bikeway (Bike Path) provides a completely separated facility designed for the exclusive use of cycles and pedestrians.
- Class II Bikeway (Bike Lane) provides on-road striped lanes with signs and pavement markings and legends with restricted travel to motor vehicles and pedestrians. Through travel by motor vehicles or pedestrians is prohibited, but crossflows by pedestrians and motorists is permitted.
- Class III Bikeway (Bike Route) provides on-street routes designated by signs or permanent markings and shared with pedestrians and motorists.
- Class IV Bikeway (Separated Bikeway) is a bikeway for the exclusive use of bicycles similar to a Class II facility, but includes a separation between the bike facility and through vehicular traffic. Separation facilities may include flexible posts, inflexible physical barriers or on-street parking. Class IV facilities also allow for two-way bicycle traffic.

Per the Placer County Regional Bikeway Plan, Class I trails are proposed to extend the Dry Creek Greenway west to Atkinson Street and east to Watt Avenue and between Walerga Road and Crowder Lane along a Dry Creek tributary. On-street bikeways (Class II or III) are currently planned for the following roads in the project vicinity:

- Baseline Road – Walerga Road to Foothills Boulevard;
- PFE Road – Walerga Road to Atkinson Street;
- Vineyard Road – Crowder Lane to Foothills Boulevard;
- Walerga Road – Sacramento County Line to Dry Creek.

Existing bicycle facilities in the project area include the following:

- On Baseline Road, Class II bike lanes on the north and south sides of the road east of Brady Lane.
- On Vineyard Road, Class II lanes are marked west of Crowder Lane and on the south side from Crowder Lane to 0.25-mile west of Cook Riolo Road. Within the vicinity of the project site, Class II bike lanes are striped east of Brady Lane on both sides of Vineyard Road.

Transit System

Transit service in the vicinity of the project site is currently provided by Roseville Transit. The closest Roseville Transit route is the 'D' route, which follows Baseline Road between Junction Boulevard and Cook Riolo Road, Monday through Saturday. Route R follows Foothills Boulevard and passes the Baseline Road and Vineyard Road intersections on weekdays. Currently, future transit routes are not identified along Vineyard Road, however, the DCWPCP notes that routes could be extended to serve future growth in the project area if warranted by demand.

14.3 REGULATORY CONTEXT

Existing transportation policies, laws, and regulations that would apply to the proposed project are summarized below and provide a context for the impact discussion related to the project's consistency with the applicable regulatory conditions. Federal and/or State plans, policies, regulations, or laws related to transportation and circulation are not directly applicable to the proposed project. Rather, the analysis presented herein focuses on local Placer County regulations, which govern the regulatory environment related to transportation and circulation at the project level.

Local Regulations

Local rules and regulations applicable to the proposed project are discussed below.

Placer County General Plan

The following goals and policies from the Placer County General Plan are applicable to the proposed project:

Goal 3.A — To provide for the long-range planning and development of the County's roadway system to ensure the safe and efficient movement of people and goods.

Policy 3.A.1 — The County shall plan, design, and regulate roadways in accordance with the functional classification system described in Part I of this Policy Document and reflected in the Circulation Plan Diagram.

Policy 3.A.2 — Streets and roads shall be dedicated, widened, and constructed according to the roadway design and access standards generally defined in Section I of this Policy Document and, more specifically in community plans, specific plans, and the County's Highway Deficiencies Report (SCR 93). Exceptions to these standards may be considered due to environmental, geographical, historical, or other similar limiting factors. An exception may be permitted only upon determination by the Public Works Director that safe and adequate public access and circulation are preserved.

Policy 3.A.7. — The County shall develop and manage its roadway system to maintain the following minimum levels of service (LOS), or as otherwise specified in a community or specific plan).

a. LOS "C" on rural roadways, except within one-half mile of state highways where the standard shall be LOS "D".
b. LOS "C" on urban/suburban roadways except within one-half mile of state highways where the standard shall be LOS "D".
c. An LOS no worse than specified in the Placer County Congestion Management Program (CMP) for the state highway system.

Temporary slippage in LOS C may be acceptable at specific locations until adequate funding has been collected for the construction of programmed improvements.

The County may allow exceptions to the level of service standards where it finds that the improvements or other measures required to achieve the LOS standards are unacceptable based on established criteria. In allowing any exception to the standards, the County shall consider the following factors:

- The number of hours per day that the intersection or roadway segment would operate at conditions worse than the standard.
- The ability of the required improvement to significantly reduce peak hour delay and improve traffic operations.
- The right-of-way needs and the physical impacts on surrounding properties.
- The visual aesthetics of the required improvement and its impact on community identity and character.
- Environmental impacts including air quality and noise impacts.
- Construction and right-of-way acquisition costs.
- The impacts on general safety.
- The impacts of the required construction phasing and traffic maintenance.
- The impacts on quality of life as perceived by residents.
- Consideration of other environmental, social, or economic factors on which the County may base findings to allow an exceedance of the standards.

Exceptions to the standards will only be allowed after all feasible measures and options are explored, including alternative forms of transportation.

Policy 3.A.13 The County shall assess fees on new development sufficient to cover the fair share portion of that

development's impacts on the local and regional transportation system. Exceptions may be made when new development generates significant public benefits (e.g., low income housing, needed health facilities) and when alternative sources of funding can be identified to offset foregone revenues.

Goal 3.B To promote a safe and efficient mass transit system, including both rail and bus, to reduce congestion, improve the environment, and provide viable non-automotive means of transportation in and through Placer County.

Policy 3.B.1 The County shall work with transit providers to plan and implement additional transit services within and to the County that are timely, cost-effective, and responsive to growth patterns and existing and future transit demand.

Policy 3.C.4 During the development review process, the County shall require that proposed projects meet adopted Trip Reduction Ordinance (TRO) requirements.

Policy 3.D.5 The County shall continue to require developers to finance and install pedestrian walkways, equestrian trails, and multi-purpose paths in new development, as appropriate.

Policy 3.D.8 The CDRA Engineering and Surveying Division and the Department of Public Works shall view all transportation improvements as opportunities to improve safety, access, and mobility for all travelers and recognize cycling, pedestrian, and transit modes as integral elements of the transportation system.

DCWPCP

The following goals policies from the DCWPCP are applicable to the proposed project:

Community Development Element

Goal 1/Policy 1 Encourage residential development in areas which provide an adequate and accessible transportation network and which reduce commuting distances to areas of employment.

Community Design Element

Policy 16 Require the dedication of sufficient road right-of-way as outlined in the Circulation Element and as needed to provide all roadside amenities required herein.

Policy 17 Require the construction of bicycle, pedestrian, and equestrian trails as provided in this Plan and use the policies of the Placer County Bikeways Master Plan in determining routes and trail type for areas not depicted on the Plan Trails map but still required to satisfy the policies of this Plan.

Transportation and Circulation Element

Goal 5 The road network within the Community Plan area shall be coordinated with road networks of adjacent jurisdictions.

Goal 6 The Capital Improvement Program (CIP) shall be sufficient to maintain LOS D on the *Community Plan* area road 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.

Arterial Roadways

- Baseline Road – Sutter County Line to Walerga Road/Fiddyment Road: LOS E
- Watt Avenue – Sacramento County Line to Baseline Road: LOS F

Roadway Segments

- Cook Riolo Road – Vineyard Road to Baseline Road: LOS E
- Cook Riolo Road – PFE Road to Vineyard Road: LOS F
- Antelope Road – PFE Road to Sacramento County Line: LOS E
- PFE Road – Cook Riolo Road to Antelope Road: LOS F
- Vineyard Road – Cook Riolo Road to Foothills Blvd: LOS F

Intersections

- Baseline Road/Watt Avenue: LOS F
- Baseline Road/Walerga Road/Fiddyment Road: LOS F
- PFE Road/Cook Riolo Road: LOS F
- PFE Road/Walerga Road: LOS F
- PFE Road/Antelope Road: LOS F

Based on this LOS policy, roadway improvements in the *Community Plan* area would have an adverse impact if the following were to occur.

- The LOS would worsen from acceptable A, B, C, D, or E (for the selected locations identified above) to unacceptable E or F.
- Any worsening of LOS E or F conditions as measured by increased volume-to-capacity (v/c) ratio of 0.05 for roadways and signalized intersections or by increased delay of 5 seconds for unsignalized intersections.

Policy 3 The road network for the Community Plan area shall be planned in a manner which avoids the need for additional lanes on Cook Riolo Road.

Policy 4 The road network for the Community Plan area shall be planned in a manner which reduces future traffic volumes to the extent practicable on both PFE Road and Cook Riolo Road, and past the historic Dry Creek Elementary School site.

Policy 6 The rights-of-way for roads shall be wide enough to accommodate roadways, trails, bikeways, drainage, public utilities, landscaping/vegetation, and suitable separation between facilities. Minimum right-of-way widths are shown in the following table for roadways within the Community Plan area (summarized as Table 14-5 below):

Table 14-5
Roadway Right-of-Way Standards

Roadway	Right-of-Way
Baseline Road (Sutter County line to Walerga Road/Fiddyment Road)	106 feet
Antelope Road	100 feet
PFE Road (Watt Avenue to Walerga Road)	64 feet
PFE Road (Antelope Road to City of Roseville)	100 feet
Watt Avenue	130 feet
Walerga Road	106 feet
All Other 2 Lane Roads	60 feet

The County may modify these right-of-way standards at their discretion, and may elect to exclude landscaped areas, sidewalks, utilities, and other roadway appurtenances from the defined public right-of-way.

Policy 7 Street lighting, traffic signals, and signage shall be kept to a minimum.

Policy 8 Off-street vehicular parking shall be provided for all new development.

Policy 9 The LOS on roadways and intersections identified in the Capital Improvement Program (CIP) shall be at LOS D. Specific exceptions to this standard will be roadways and intersections that shall be LOS E or F as defined by Goal 6. The County may allow exceptions to this LOS standard where it finds that the improvements or other measures required to achieve the LOS standard are unacceptable based on established criteria. In allowing any exception to the standard, the County shall consider the following factors:

- The number of hours per day that the intersection or roadway segment would operate at conditions worse than the standard.
- The ability of the required improvement to significantly reduce peak-hour delay and improve traffic operations. The County shall weigh the costs versus the benefit of each proposed improvement.
- The right-of-way needs and the physical impacts on surrounding properties.

- The visual aesthetics of the required improvement and its impact on community identity and character.
- Environmental impacts including air quality and noise impacts.
- Construction and right-of-way acquisition costs.
- The impacts on general safety.
- The impacts of the required construction phasing and traffic maintenance.
- The impacts on quality of life as perceived by residents.
- Consideration of other environmental, social, or economic factors on which the County may base findings to allow the standards to be exceeded.
- The County shall also meet and obtain feedback from the West Placer Municipal Advisory Committee in consideration of these exceptions to established standards. Exceptions to the standard will only be allowed after all feasible measures and options are explored, including alternative forms of transportation.
- The CIP shall be constructed in response to build out.

Exceptions to the standard will only be allowed after all feasible measures and options are explored, including alternative forms of transportation.

Policy 11 On-site and "frontage" improvements of projects which comprise the CIP shall be required as conditions of approval for all land development projects. Priority and scheduling of projects from the CIP shall be determined by the Placer County Board of Supervisors.

Policy 13 Community Plan area roadways shall be designed and maintained to encourage safe, alternative forms of transportation that contribute to a rural atmosphere (such as walking, biking, horseback riding, etc.). Roadways which provide access to the linear "parkway" along Dry Creek and residential areas shall be designed to discourage through traffic. Alignment, width, signage, etc., shall all be appropriate for a minor residential street rather than a major arterial.

Policy 14 As development of the Community Plan area occurs, public dedication of rights-of-way shall be required for the roads, trails, and bikeways identified in this Community Plan. Construction of such roads, trails, and bikeways shall be required as conditions of approval placed on land development project approvals.

Policy 16	Bus stop turnouts and shelters shall be required at appropriate locations as conditions of approval for land development. The review of such facilities shall be coordinated with the appropriate school district(s) to assure proper locations for student pick-up and drop-off "park-n-ride" shelters and parking areas shall be required at appropriate locations as conditions of approval.
Policy 18	Land development projects shall be designed to minimize the number of access points onto major roadways.
Policy 19	Adequate safety precautions shall be provided at major intersections. Such precautions may include crossing guards, signalization, and other measures to improve the safety for pedestrians and reduce the risk of accidents.
Policy 20	A full environmental analysis under the California Environmental Quality Act at a project level shall be undertaken, and public hearings shall be held prior to approval of the widening of any road scheduled for expansion under this Community Plan.

Placer County Transportation Planning Agency (PCTPA)

The PCTPA is the State-designated Regional Transportation Planning Agency for Placer County and is responsible for making decisions about the County's transportation system. In addition to developing and adopting the regional transportation plans and strategies, the PCTPA also allocates the local transportation fund and has entered into a Memorandum of Understanding with Caltrans and SACOG to govern federal transportation planning and programming in Placer County.

Funding Sources/Fee Programs

In April 1996, the Placer County Board of Supervisors adopted the Countywide Traffic Impact Fee Program, which required new development within the County to mitigate impacts to the roadway system by paying traffic impact fees. The fees collected through the program, in addition to other funding sources, make it possible for the County to construct roads and other transportation facilities and improvements needed to accommodate new development. The fee was last updated in August of 2017. The County's fee program and CIP are divided into eleven districts. The proposed project site is included in the Dry Creek – West Placer Benefit District. Current study area improvements included in the fee program are noted in Table 14-6.

Other fee programs deal with specific areas of the County or are linked to particular development. For example, Placer County and the City of Roseville have adopted a specific City-County fee. The South Placer Regional Transportation Authority (SPRTA) SR 65 GPA fee addresses improvements to SR 65 and a Tier 2 Placer Parkway Fee.

Table 14-6
Dry Creek/West Placer CIP Improvements

Street	Location	Description
Cook Riolo Road	PFE Road to Baseline Road	Traffic calming/safety measures
Antelope Road	Sacramento County line to PFE Road	Widen to four lanes
	At PFE Road	Traffic signal
PFE Road	Antelope Road to City of Roseville	Widen to four lanes
	Walerga Road to Cook Riolo Road	Traffic calming/control
	Watt Avenue to Walerga Road	Construct four lanes
Vineyard Road	Crowder Lane to Foothills Boulevard	Safety measures
Walerga Road	Baseline Road to Sacramento County	Widen to six lanes
	At PFE Road	Traffic signal/intersection improvements

14.4 IMPACTS AND MITIGATION MEASURES

This section describes the standards of significance and methodology utilized to analyze and determine the proposed project's potential impacts related to transportation and circulation.

Standards of Significance

Consistent with Appendix G of the CEQA Guidelines, the proposed project would be considered to result in a significant adverse impact on the environment in relation to transportation and circulation if the project would result in 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 to vehicle safety due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
- Result in inadequate emergency access or access to nearby uses;
- An increase in traffic which may be substantial in relation to the existing and/or planned future year traffic load and capacity of the roadway system (i.e. result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections); or
- Exceeding, either individually or cumulatively, an LOS standard established by the County General Plan and/or Community Plan for roads affected by project traffic.

It should be noted that Section 15064.3 of the CEQA Guidelines provides specific considerations for evaluating a project's transportation impacts. However, the provisions of Section 15064.3 apply only prospectively; determination of impacts based on VMT is not required Statewide until July 1, 2020. In addition, the County has not adopted a project-level VMT threshold. Thus, while this chapter includes a discussion of the project's VMT for informational purposes, a VMT impact determination is not provided.

Specific application of the general thresholds is provided in the following section, based on guidance from Placer County and the City of Roseville.

Placer County/DCWPCP Standards of Significance

Minimum acceptable LOS standards within this area of Placer County are defined by the Placer County General Plan and the DCWPCP. The Placer County General Plan notes that the LOS on

major roadways (i.e., arterial and collector routes) and intersections shall be at LOS C or better during the AM and/or PM peak hour except at locations within 0.5-mile of a State highway.

Goal 6 in the Transportation and Circulation Element of the DCWPCP identifies LOS D as the minimum in the community plan area, but notes the following exceptions when the area street system is fully built out:

Intersections

- Baseline Road/Walerga Road/Fiddyment Road: LOS F;
- PFE Road/Walerga Road: LOS F;
- PFE Road/Cook Riolo Road: LOS F; and
- PFE Road/Antelope Road: LOS F.

Roadway Segments

- Watt Avenue from Sacramento County Line to Baseline Road: LOS F;
- PFE Road from Cook Riolo Road to Antelope Road: LOS F;
- Cook Riolo Road from Vineyard Road to Baseline Road: LOS E;
- Cook Riolo Road from PFE Road to Vineyard Road: LOS F;
- Vineyard Road from Cook Riolo Road to Foothills Blvd: LOS F; and
- Antelope Road from PFE Road to Sacramento County Line: LOS E.

Placer County Impact Assessment

Placer County has adopted methodologies for determining the significance of traffic impacts within the context of the LOS goals established by the General Plan and various community plans. Methodologies for evaluating intersections and roadway segments within Placer County are described in the following sections.

Signalized Intersections

For signalized intersections, a project may be considered to exceed the established Placer County minimum LOS standard if:

- An intersection operating at or above the established Placer County LOS standard without the project would decrease to an unacceptable LOS with the project;
- An intersection currently operating below the established Placer County LOS standard would experience an increase in V/C of 0.05 (5 percent) or greater; or
- An intersection currently operating below the established Placer County LOS standard would experience an increase in overall average intersection delay of 4.0 seconds or greater.

Unsignalized Intersections

For unsignalized intersections, a project may be considered to exceed the established Placer County minimum LOS standard if:

- An all-way stop or side-street stop (i.e., two-way stop) controlled intersection which currently operates at or above the established Placer County LOS standard without the project would deteriorate to an unacceptable LOS with the project and cause the intersection to meet MUTCD traffic signal warrant(s); or

- An all-way stop or side-street stop-controlled intersection which currently operates below the established Placer County LOS standard and meets MUTCD traffic signal warrant(s) would experience an overall increase in delay of 2.5 seconds or more with the project (Note: the DCWPCP Circulation Element Goal 6 accepts a 5.0 second increase under cumulative conditions).

Intersection delay for all-way stop-controlled intersections is defined as "overall intersection delay". Intersection delay for side-street stop-controlled intersections is defined as the "overall weighted-average delay for movements yielding the right-of-way". The applicable MUTCD signal warrants for the proposed project were determined in consultation with the Placer County Department of Public Works transportation staff.

Roadway Segments

A project may be considered to exceed the established Placer County minimum LOS standard if:

- A roadway segment operating at or above the established Placer County LOS standard without the project would decrease to an unacceptable LOS with the project;
- A roadway segment currently operating below the established Placer County LOS standard would experience an increase in V/C ratio of 0.05 or greater; or
- A roadway segment currently operating below the established Placer County LOS standard experiences an increase in ADT of 100 or more project-generated vehicle trips per lane (vpl).

Further consideration is given in situations where the existing LOS is just above or at the approved minimum LOS and any increase in vehicle trips, or even daily fluctuations in traffic, would deteriorate the LOS to an unacceptable level. In such cases, the County may determine the second and third bullet points of the above exceptions are more applicable and should be used to analyze a project's impacts.

It should be noted that the Placer County traffic operational analysis requirements and methods of assessment apply to the intersections of public roads. The LOS occurring at private driveways are not considered to be an impact significance criterion. Thus, information regarding the operation of Creekview Ranch Middle School's access on Cook Riolo Road would not normally be included in traffic studies prepared for a project in Placer County, but is offered herein due to the unique circumstances of school operations and public interest in this location.

City of Roseville Impact Assessment

The City of Roseville's General Plan 2035 identifies an LOS policy that calls for maintaining LOS C or better operations at a minimum of 70 percent of all signalized intersections and roadway segments in the City during the AM and PM peak hours. Exceptions to the LOS C standard may be considered for intersections where the City finds that the required improvements are unacceptable based on established criteria identified in the implementation measures (i.e., the City of Roseville CIP/LOS criteria, the City's development review process, or applicable Specific Plans).[5] The City's LOS policy is not applicable in Pedestrian Overlay Districts, which represent areas of the City in which a comfortable walking environment is prioritized over wider streets that may produce less vehicle delay.

[5] City of Roseville. *Roseville General Plan, Circulation Element* [pg. III-33]. June 15, 2016.

Signalized Intersections

For the purposes of this analysis, a significant impact would occur to City of Roseville intersections if the project would result in either of the following:

- Cause a signalized intersection in Roseville to be degraded as follows under existing conditions during the AM or PM peak hours:
    - For intersections currently operating at LOS C or better: worsen operations to LOS D or worse.
    - For intersections that currently operate at LOS D or E: cause operations to further worsen by one or more service levels.
    - For intersections that currently operate at LOS F: cause intersection delay to worsen by 12.5 seconds or greater.
- Cause the overall percentage of signalized intersections throughout the City of Roseville operating at LOS C or better during the AM and PM peak hours to fall below 70 percent.

Based on the above, this analysis assumes LOS C is the City's minimum LOS goal. However, the City of Roseville has determined that some intersections will operate with Level of Service that exceeds LOS C under Year 2035 conditions (refer to Circulation Element Table III-3). Within the study area such intersections include the following:

1. Baseline Road/Cook Riolo Road/Woodcreek Oaks Boulevard (LOS E AM/LOS D PM);
3. Baseline Road/Foothills Boulevard (LOS E AM/LOS D PM); and
12. Baseline Road/Walerga Road/Fiddyment Road (LOS D AM/LOS D PM).

The City of Roseville General Plan policy has been structured to allow the City some flexibility to identify any case where LOS C might not be able to be maintained or the identified major improvements (such as grade separations) are determined to be undesirable. Per the City's General Plan, while this could lead to some intersections operating at worse than LOS C conditions for a limited amount of time per day, the overall number of intersections predicted to operate at below LOS C is considered acceptable to the City.[6]

Unsignalized Intersections

The City of Roseville does not typically consider LOS at un-signalized intersections or roadway segments to be a significance criterion under CEQA. For this analysis, the criteria employed by Placer County in the Placer County Sports and Event Complex Project Draft EIR was employed. Consistent with other studies that have analyzed unsignalized City of Roseville intersections, impacts are determined based on delay/LOS and whether or not the peak hour signal warrant would be met.

For purposes of this analysis, a significant impact would occur if the project would result in any of the following at a study intersection:

- Cause an unsignalized intersection in Roseville outside of the Pedestrian Overlay District to be degraded as follows under existing or cumulative conditions:
    - For intersections currently (or projected to be) operating at LOS C or better, worsen operations to LOS D or worse and meet the MUTCD peak hour signal warrant.
    - For intersections currently (or projected to be) operating at less than LOS C, cause

[6] City of Roseville. *General Plan 2035* [pg. III-16]. Adopted June 15, 2016.

operations to further worsen by one or more service levels and meet the MUTCD peak hour signal warrant.

- For intersections currently (or projected to be) operating at LOS F, cause intersection delay to worsen by 12.5 seconds or greater and meet the MUTCD peak hour signal warrant.

Roadway Segments

The City of Roseville does not typically consider daily traffic volume on roadway segments to be a significance criterion. LOS based on Placer County thresholds has been presented on selected City of Roseville facilities for illustrative purposes.

Method of Analysis

The analysis methodology provided in the Traffic Impact Study prepared for the proposed project by KD Anderson & Associates, Inc. is discussed below.

Analysis Scenarios

The following analysis scenarios are included in this chapter:

- **Existing Condition:** LOS based on current traffic counts, existing roadway geometry, and existing traffic control.
- **Existing Plus Project Condition:** Existing traffic volumes, roadway geometry, and traffic control plus trips from the proposed project.
- **Cumulative No Project Condition:** Traffic volumes associated with cumulative (year 2035) buildout of the project region without traffic generated by the proposed project. The Cumulative No Project Condition includes reasonably certain projected changes to intersection geometry and roadway segments.
- **Cumulative Plus Project Condition:** Traffic associated with the Cumulative No Project Condition plus traffic generated by the proposed project under full buildout.

Project Trip Generation

The number of automobile trips that would be generated by the proposed project was estimated through application of trip generation rates acceptable to Placer County. For operation of the project, applicable trip generation rates were obtained from the Institute of Transportation Engineer's (ITE) publication, Trip Generation Manual, 10th edition. Table 14-7 below identifies the trip generation applied to the proposed residential subdivision. As shown in the table, the proposed project would generate an estimated 1,123 daily trips, with 88 trips expected in the AM peak hour and 118 new trips generated during the PM peak hour.

Table 14-7
Project Trip Generation

Land Use	Unit / Quantity	Trip Generation						
		Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Single Family Residential	*Dwelling unit*	*9.44*	*25%*	*75%*	*0.74*	*63%*	*37%*	*0.99*
Proposed Project	**119 units**	**1,123**	**22**	**66**	**88**	**74**	**64**	**118**

Source: KD Anderson & Associates, Inc.

In addition to the 119 single-family residential units included in the proposed project, the Project Description chapter of this EIR recognizes the potential for up to 12 additional on-site residential units (Accessory Dwelling Units) to be included in the project in order to meet the County's affordable housing requirements. Under the most intensive scenario, the project would include 119 single-family lots and between six and 12 Accessory Dwelling Units (ADUs). KD Anderson & Associates determined the trip generation associated with the ADUs by applying applicable trip generation rates published in the ITE Trip Generation Manual for Multiple Family Residential – Low Rise (category 220).[7] As shown in Table 14-8 below, if included, the additional 12 ADUs would result in a total of 88 average daily trips, with six trips expected in the AM peak hour and seven trips generated during the PM peak hour.

Table 14-8
Project Trip Generation – with ADUs

Land Use	Unit / Quantity	Trip Generation						
		Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Single Family Residential	*Dwelling unit*	*9.44*	*25%*	*75%*	*0.74*	*63%*	*37%*	*0.99*
Proposed Single Family	119 units	1,123	22	66	88	74	64	118
Multiple Family Residential	*Dwelling unit*	*7.32*	*23%*	*77%*	*0.46*	*63%*	*37%*	*0.56*
Proposed ADUs	12 units	88	1	5	6	4	3	7
Total		**1,211**	**23**	**71**	**94**	**78**	**67**	**125**

Source: KD Anderson & Associates, Inc.

Project Trip Distribution and Assignment

The distribution of trips to and from the project site was determined by conducting a select zone analysis for the project site using the Placer Vineyards Regional Travel Demand Forecasting Model. Model results were reviewed in coordination with Placer County staff. Manual adjustments were made for the AM peak hour distribution due to the probable interaction between the proposed project and Creekview Ranch School, as some future residents of the project may drop off students before continuing on to a destination projected by the traffic model. The share of project trips that may first visit Creekview Ranch School was determined based on the following factors:

- Availability of Bussing by the DCUSD. Because continuous pedestrian facilities are not available between the project site and the Creekview Ranch School, the DCJESD would likely provide bussing to and from the project site.
- Share of Creekview Ranch School's Eligible Regular Students Who Elect to Ride Buses. Currently, roughly 145 regular students out of a total of 731 Creekview Ranch School students are bussed. Students in the Morgan Creek area south of the school are not bussed, and school-wide, roughly 520 students appear to be eligible to be bussed. Thus, approximately 28 percent of eligible students elect to ride busses.
- Mode Share. The DCJESD estimates a yield of 0.71 Creekview Ranch School students per residence. Thus, the 119 proposed homes could yield 85 new students. Assuming that the school's average bussing rate continues, approximately 24 bus riders would be

[7] KD Anderson & Associates, Inc. *Traffic Impact Analysis for Brady Vineyard Subdivision: Assessment of 12 Ancillary Units.* August 21, 2019.

generated by the project, and 61 students would be driven to school. At a typical automobile occupancy rate for school traffic (i.e., 1.5 students per vehicle), 41 project vehicles would be destined for Creekview Ranch School.

- Share of Total AM Peak Hour Traffic. The Brady Vineyard project would generate 22 inbound and 66 outbound trips in the AM peak hour. Trips first made to Creekview Ranch School represent 62 percent of the outbound total (41/66). Assuming 62 percent of the project's inbound AM peak hour trips are also from Creekview Ranch then 14 trips (i.e., 62 percent of 22 total project inbound trips) of the trips to the school will return to the project site and 27 trips will continue to regional destinations (i.e., of the 41 project trips destined for Creekview Ranch School, 14 would return to the project site and the remaining 27 would continue to regional destinations).

The trip distribution assumption, which was approved by County staff, is shown in Figure 14-4 and Table 14-9 below.

Table 14-9
Project Trip Distribution

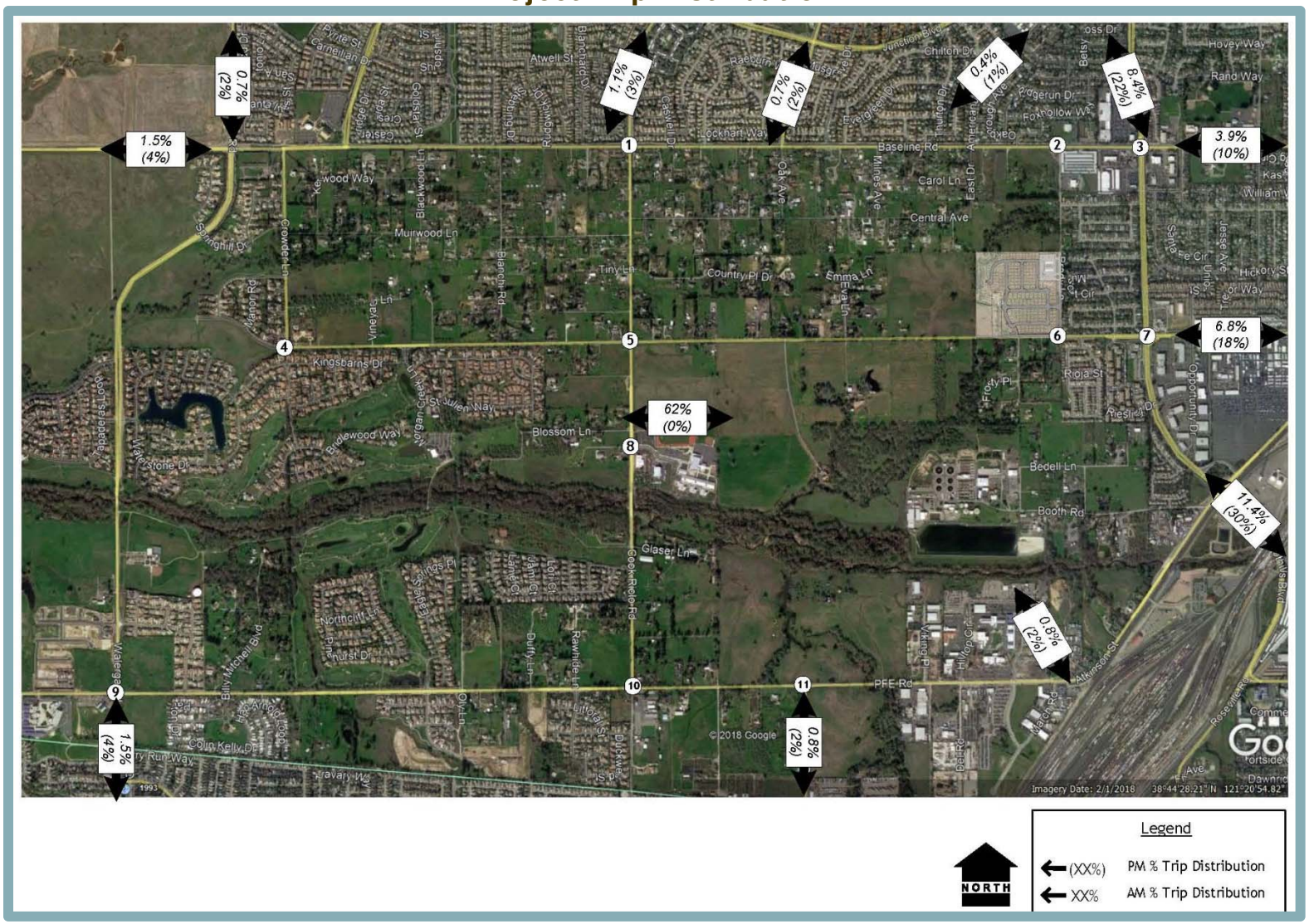
Direction	Route	Percent of Total Trips		
		AM	PM	Daily
North	Woodcreek Oaks	1.1%	3%	2.9%
	Americana Dr/Country Club Dr	1.1%	3%	2.9%
	Foothills Blvd	8.4%	22%	20.8%
East	Baseline Rd	3.9%	10%	9.5%
	Vineyard Rd	6.8%	18%	17.1%
West	Baseline Rd west of Cook Riolo Rd	2.2%	6%	5.7%
	Creekside Ranch School	62.0%	0%	5%
South	Walerga Rd	1.5%	4%	3.8%
	Foothills Blvd	11.4%	30%	28.5%
	Off of Atchison	0.8%	2%	1.9%
	Antelope Road	0.8%	2%	1.9%
	Total	**100.00%**	**100.00%**	**100.00%**

Source: KD Anderson & Associates, Inc.

While the proposed project would have only one regular access point, multiple off-site routes are available to reach most destinations. To determine the choice of routes, the relative travel time along each route was estimated, and the project's trips were assigned to the local street system in response to comparative times. Resulting "project only" trips, including trips continuing from Creekside Ranch School, are illustrated in Figure 14-5.

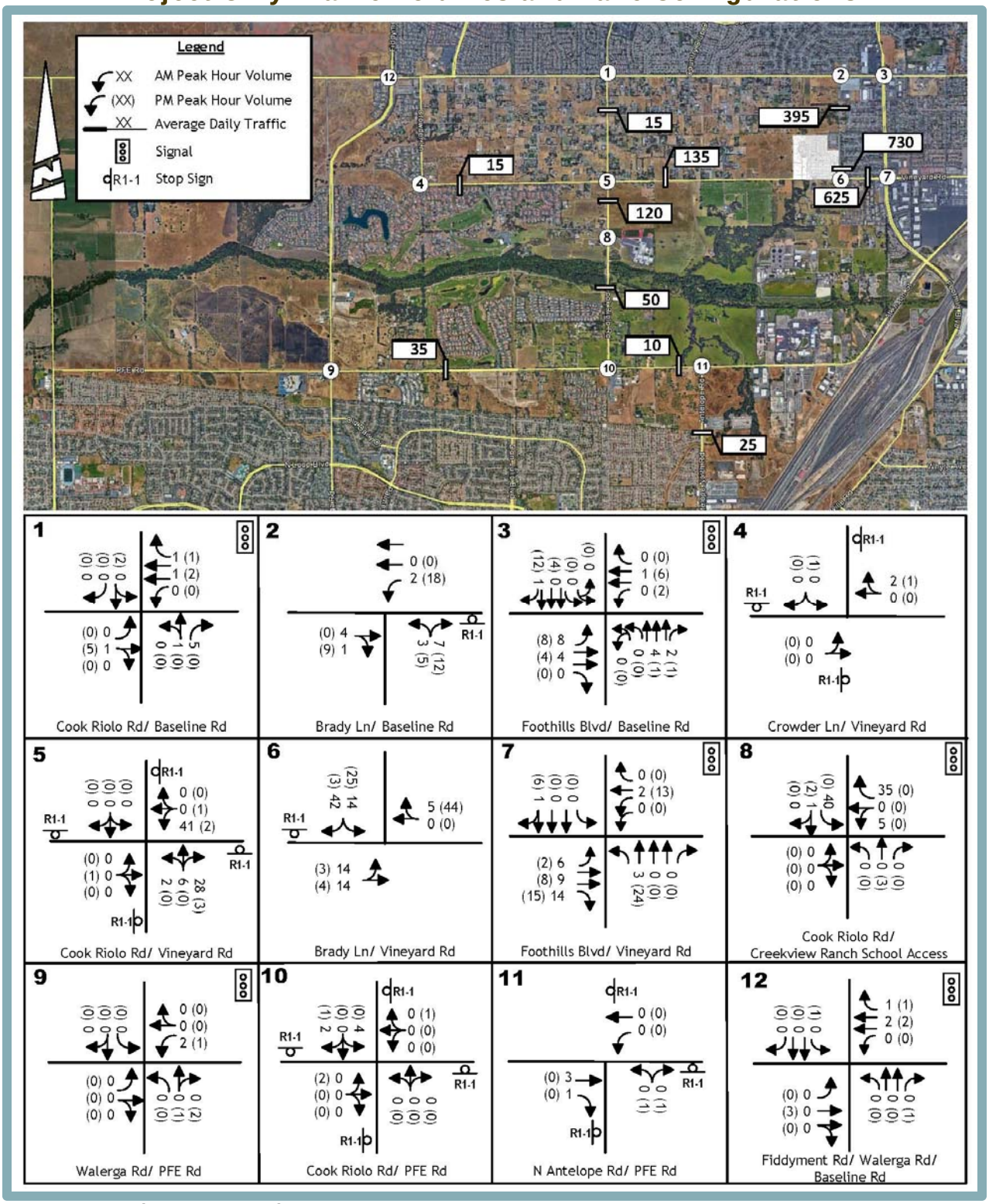
In the event that the proposed project includes the construction of ADUs, in addition to the 119 proposed single-family units, the distribution of trips to and from the ADUs would be similar to the assumptions discussed above, including the share of project trips that may first visit Creekview Ranch School. Resulting trips from the ADUs, including trips continuing from Creekside Ranch School, are illustrated in Figure 14-6.

Figure 14-4
Project Trip Distribution



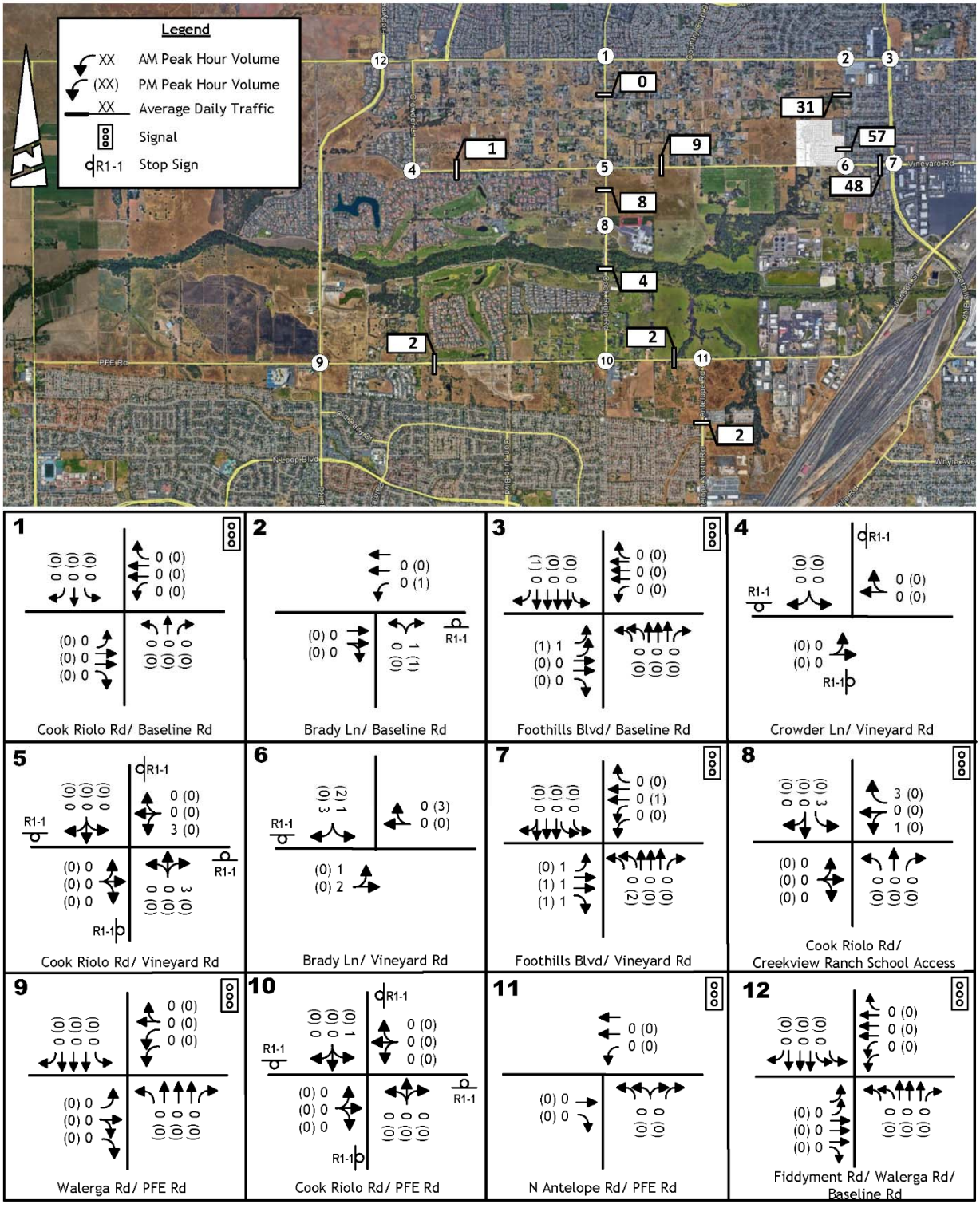
Source: KD Anderson & Associates, Inc.

Figure 14-5
Project Only Traffic Volumes and Lane Configurations



Source: KD Anderson & Associates, Inc.

Figure 14-6
Accessory Dwellings Only Traffic Volumes and Lane Configurations



Source: KD Anderson & Associates, Inc.

Existing Plus Project Circulation System Improvements

Figure 14-5 above presents the intersection geometry assumed under the "plus project" condition. The project would complete frontage improvements that would allow for the widening of Brady Lane and Vineyard Road. Brady Lane would be widened to its ultimate width along the project frontage, allowing for a creation of a southbound left turn lane at the Vineyard Road/Brady Lane intersection. A Two-Way Left-Turn (TWLT) lane would be available at the project access intersection, which would be side-street stop controlled. In addition, while a pending improvement project at the PFE Road/Walerga Road intersection may be completed before the Brady Vineyard project is occupied, to provide a conservative estimate of project impacts, this analysis assumes that this improvement is not in place under "Existing Plus Project" conditions, consistent with direction from County staff.

Project Vehicle Miles Travelled

As part of the Traffic Impact Analysis, KD Anderson & Associates, Inc. estimated per capita vehicle miles travelled (VMT) associated with the proposed project. Project-related VMT was calculated using the Placer Vineyards traffic model, which addresses travel across the six-county SACOG area, while isolating travel associated with land uses on the project site.

The model results indicate that the proposed project would generate 6,879 VMT under Existing Plus Project conditions and 6,640 VMT under Cumulative Plus Project conditions. The "per capita" VMT was determined by dividing the total VMT by the anticipated 367 residents (based on a rate of 3.08 persons per household in the DCWPCP area, as discussed in Chapter 11 of this EIR). The per capita VMT for the project is 18.7 under Existing Plus Project Conditions and 18.1 under Cumulative Plus Project Conditions.

Project-Specific Impacts and Mitigation Measures

The proposed project impacts on the transportation system are evaluated in this section based on the thresholds of significance and methodology described above. Each impact is followed by recommended mitigation to reduce the identified impacts, if needed.

14-1 Conflict with a program, plan, ordinance, or policy addressing the circulation system, substantially increase traffic in relation to the existing traffic load and capacity of the roadway system, or exceed an established LOS standard during construction activities. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

Construction of the project, including site preparation, grading, construction, and delivery activities, would generate vehicle trips on local roadways, including heavy-duty haul truck trips. In addition, the project would include improvements to Brady Lane and Vineyard Road within the project site vicinity, which could temporarily impede traffic. As a result, construction activities could include disruptions to the transportation network near the project site, including the possibility of temporary lane closures.

Nonetheless, construction workers typically arrive before the morning peak hour and leave before the evening peak hours of the traditional commute time periods. Deliveries of building material (lumber, concrete, asphalt, etc.) would also normally occur outside of the traditional commute time periods. However, without proper planning of construction

activities, construction traffic and potential street closures could interfere with existing roadway operations during the construction phase. Therefore, project traffic related to construction activities could result in a ***significant*** impact.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

14-1 *The Improvement Plans shall include a striping and signing plan and shall include all on- and off-site traffic control devices. Prior to the commencement of construction, a construction signing and traffic control plan shall be provided to the Engineering and Surveying Division for review and approval. The construction signing and traffic control plan shall include (but not be limited to) items such as:*

- *Guidance on the number and size of trucks per day entering and leaving the project site;*
- *Identification of arrival/departure times that would minimize traffic impacts;*
- *Approved truck circulation patterns;*
- *Locations of staging areas;*
- *Locations of employee parking and methods to encourage carpooling and use of alternative transportation;*
- *Methods for partial/complete street closures (e.g., timing, signage, location and duration restrictions);*
- *Criteria for use of flaggers and other traffic controls;*
- *Preservation of safe and convenient passage for bicyclists and pedestrians through/around construction areas;*
- *Monitoring for roadbed damage and timing for completing repairs;*
- *Limitations on construction activity during peak/holiday weekends and special events;*
- *Preservation of emergency vehicle access;*
- *Coordination of construction activities with construction of other projects that occur concurrently in the DCWPCP to minimize potential additive construction traffic disruptions, avoid duplicative efforts (e.g., multiple occurrences if similar signage), and maximize effectiveness of traffic mitigation measures (e.g., joint employee alternative transportation programs);*
- *Removing traffic obstructions during emergency evacuation events; and*
- *Providing a point of contact for DCWPCP residents and guests to obtain construction information, have questions answered, and convey complaints.*

The construction signing and traffic control plan shall be developed such that the following minimum set of performance standards is achieved throughout project construction. It is anticipated that additional performance standards would be developed once details of project construction are better known.

- *All construction employees shall park in designated lots owned by the project applicant or on private lots otherwise arranged for by the project applicant.*
- *Roadways shall be maintained clear of debris (e.g., rocks) that could otherwise impede travel and impact public safety.*

14-2 Conflict with a program, plan, ordinance or policy addressing study intersections, substantially increase traffic in relation to the existing traffic load and capacity of the study intersections, or exceed an established LOS standard under Existing Plus Project conditions. Based on the analysis below, impacts to all study intersections under Existing Plus Project Conditions would be less than significant, with the exception of the Baseline Road/Brady Lane intersection. Given the lack of feasible mitigation, the impact is *significant and unavoidable*.

As noted previously, development of the proposed project would result in an increase of approximately 1,123 ADT on local roadways. Figure 14-7 displays the Existing Plus Project conditions traffic volumes at each study intersection for both AM and PM peak hours. Table 14-10 below summarizes operations at each of the study intersections with the proposed 119 single-family units.

Table 14-11 below summarizes operations at each of the study intersections with the proposed 119 single-family units plus 12 additional ADUs. As shown in the tables, all study intersections operate acceptably under Existing conditions without the addition of project traffic, with the exception of the following three intersections:

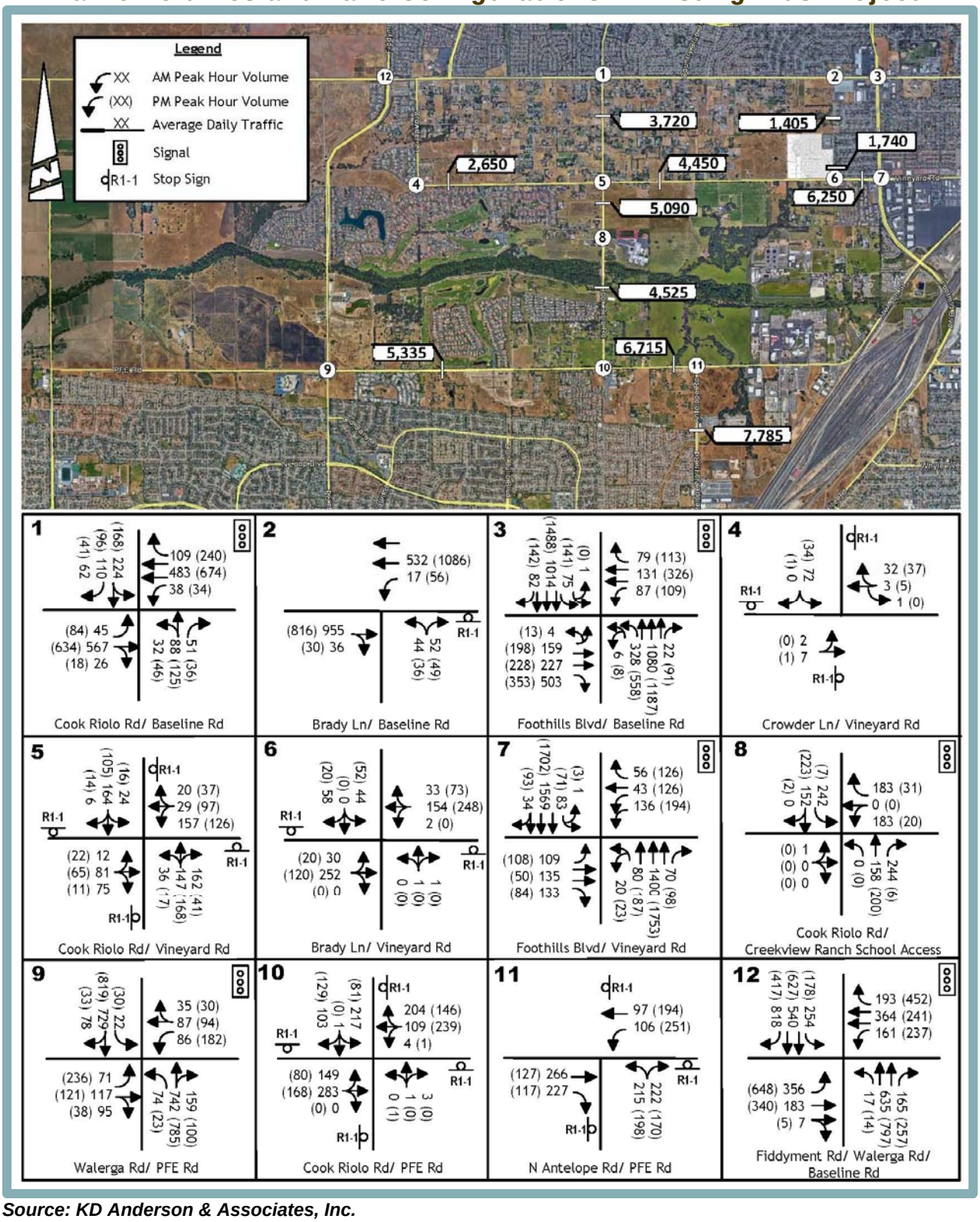
3. Baseline Road/Foothills Boulevard (City of Roseville);
9. PFE Road/Walerga Road; and
12. Baseline Road/Walerga Road/Fiddyment Road (City of Roseville).

The proposed project would not result in degradation of any of the above intersections from an acceptable LOS to an unacceptable LOS under Existing Plus Project conditions. Because the intersections listed above are already deficient under Existing conditions, the project's impact is determined based on the incremental change in overall delay and the satisfaction of traffic signal warrants. However, at the Baseline Road/Brady Lane intersection, the operations would degrade from an acceptable LOS under Existing conditions to an unacceptable LOS D under Existing Plus Project conditions. The following sections provide an analysis of potential impacts related to operations at the listed intersections.

Baseline Road/Brady Lane

In the City of Roseville, the side street delay at the Baseline Road/Brady Lane intersection would deteriorate from LOS C to LOS D in the AM peak hour, and peak hour traffic signal warrant would be satisfied at that time. Therefore, a significant impact would occur.

Figure 14-7
Traffic Volumes and Lane Configurations – Existing Plus Project



Source: KD Anderson & Associates, Inc.

Table 14-10
Intersection LOS – Existing Plus Project Conditions

Location	Control	AM Peak Hour				PM Peak Hour				Traffic Signal Warrant Met?
		Existing		Existing Plus Project		Existing		Existing Plus Project		
		LOS	Average Delay (veh/sec)	LOS	Average Delay (veh/sec)	LOS	Average Delay (veh/sec)	LOS	Average Delay (veh/sec)	
1. Baseline Rd/Cook Riolo Rd/Woodcreek Oaks Blvd (R)	Signal	C	32.0	C	32.0	C	30.5	C	30.5	N/A
2. Baseline Rd/Brady Ln (R) Northbound approach Westbound left turn	NB Stop	C B	25.0 10.5	**D** B	**26.0** 10.5	C A	21.5 10.0	C B	23.0 10.0	Yes
3. Baseline Rd/Foothills Blvd (R)	Signal	C	32.0	C	32.0	**D**	**40.5**	**D**	**41.0**	N/A
4. Vineyard Rd/Crowder Ln (overall) Southbound approach Eastbound left turn	SB Stop	(A) A A	(9.0) 9.0 7.5	(A) A A	(9.0) 9.0 7.5	(A) A A	(9.0) 9.0 0.0	(A) A A	(9.0) 9.0 0.0	No
5. Cook Riolo Rd/Vineyard Rd	AWS	B	13.5	C	16.0	B	11.0	B	11.0	No
6. Vineyard Rd/Brady Ln	AWS	A	9.0	A	10.0	A	9.0	B	9.5	No
7. Vineyard Rd/Foothills Blvd (R)	Signal	C	24.0	C	25.5	C	28.0	C	30.5	N/A
8. Cook Riolo Rd/Creekview Ranch School	Signal	B	12.0	B	13.4	A	6.0	A	6.0	N/A
9. PFE Rd/Walerga Rd	Signal	D	35.9	D	36.0	**E**	**71.0**	**E**	**72.0**	N/A
10. PFE Rd/Cook Riolo Rd	AWS	D	28.0	D	28.5	B	14.0	B	14.0	Yes
11. PFE Rd/Antelope Rd	AWS	C	17.5	C	17.5	C	15.5	C	15.5	Yes
12. Baseline Rd/Walerga Rd/Fiddyment Rd (R)	Signal	**D**	**40.0**	**D**	**40.5**	**F**	**81.0**	**F**	**81.0**	N/A
13. Brady Lane / Project Access (overall) Eastbound approach Northbound left turn	EB Stop			(A) A A	(8.5) 9.0 7.5			(A) A A	(8.5) 7.5 9.5	No

Notes:
- (R) indicates City of Roseville jurisdiction. Minimum LOS C standard applies.
- **Bold** indicates minimum LOS threshold exceeded; **Highlighted** values indicate a significant impact.
- Overall Average Delay = Σ (Delay x Volume of each delayed movement) / Σ Volume of each delayed movement.

Source: KD Anderson & Associates, Inc.

Table 14-11
Intersection LOS – Existing Plus Project Conditions: With 12 ADUs

Location	Control	AM Peak Hour				PM Peak Hour				Traffic Signal Warrant Met?
		Existing		Existing Plus Project + 12 ADUs		Existing		Existing Plus Project + 12 ADUs		
		LOS	Average Delay (veh/sec)	LOS	Average Delay (veh/sec)	LOS	Average Delay (veh/sec)	LOS	Average Delay (veh/sec)	
1. Baseline Rd/Cook Riolo Rd/Woodcreek Oaks Blvd (R)	Signal	C	32.0	C	32.0	C	30.5	C	30.5	N/A
2. Baseline Rd/Brady Ln (R) Northbound approach Westbound left turn	NB Stop	C B	25.0 10.5	**D** B	**26.0** 10.5	C A	21.5 10.0	C B	23.0 10.0	Yes
3. Baseline Rd/Foothills Blvd (R)	Signal	C	32.0	C	32.0	**D**	**40.5**	**D**	**41.0**	N/A
4. Vineyard Rd/Crowder Ln (overall) Southbound approach Eastbound left turn	SB Stop	(A) A A	(9.0) 9.0 7.5	(A) A A	(9.0) 9.0 7.5	(A) A A	(9.0) 9.0 0.0	(A) A A	(9.0) 9.0 0.0	No
5. Cook Riolo Rd/Vineyard Rd	AWS	B	13.5	C	16.0	B	11.0	B	11.0	No
6. Vineyard Rd/Brady Ln	AWS	A	9.0	A	10.0	A	9.0	B	9.5	No
7. Vineyard Rd/Foothills Blvd (R)	Signal	C	24.0	C	25.5	C	28.0	C	31.0	N/A
8. Cook Riolo Rd/Creekview Ranch School	Signal	B	12.0	B	13.5	A	6.0	A	6.0	N/A
9. PFE Rd/Walerga Rd	Signal	D	35.9	D	36.0	**E**	**71.0**	**E**	**72.0**	N/A
10. PFE Rd/Cook Riolo Rd	AWS	D	28.0	D	28.5	B	14.0	B	14.0	Yes
11. PFE Rd/Antelope Rd	AWS	C	17.5	C	17.5	C	15.5	C	15.5	Yes
12. Baseline Rd/Walerga Rd/Fiddyment Rd (R)	Signal	**D**	**40.0**	**D**	**40.5**	**F**	**81.0**	**F**	**81.0**	N/A
13. Brady Lane / Project Access (overall) Eastbound approach Northbound left turn	EB Stop			(A) A A	(8.5) 9.0 7.5			(A) A A	(8.5) 7.5 9.5	No

Notes:
- (R) indicates City of Roseville jurisdiction. Minimum LOS C standard applies.
- **Bold** indicates minimum LOS threshold exceeded; **Highlighted** values indicate a significant impact.
- Overall Average Delay = Σ (Delay x Volume of each delayed movement) / Σ Volume of each delayed movement.

Source: KD Anderson & Associates, Inc.

Baseline Road/Foothills Boulevard

The City of Roseville's Baseline Road/Foothills Boulevard intersection would continue to operate at LOS D in the PM peak hour with the addition of project traffic. Because project traffic would not cause the intersection LOS to further deteriorate, per City of Roseville policy, a less-than-significant impact would occur.

PFE Road/Walerga Road

In Placer County, the PFE Road/Walerga Road intersection would continue to operate at LOS E conditions in the PM peak hour with the addition of project traffic. However, the incremental change in average delay resulting from the project falls below the County's 5.0-second increase threshold. Thus, a less-than-significant impact would occur.

Baseline Road/Walerga Road/Fiddyment Road

The City of Roseville's Baseline Road/Walerga Road/Fiddyment Road intersection would continue to operate at LOS D in the AM peak hour and LOS F in the PM peak hour with the addition of project traffic. Project traffic would not cause the intersection LOS to further deteriorate, and vehicle delay during the PM peak hour would not increase relative to Existing conditions. Thus, per City of Roseville policy, a less-than-significant impact would occur.

Conclusion

Based on the above, the proposed project would have a less-than-significant impact to the Baseline Road/Foothills Boulevard, PFE Road/Walerga Road, and Baseline Road/Walerga Road/Fiddyment Road intersections. However, the addition of project traffic to the Baseline Road/Brady Lane intersection would deteriorate the intersection operations from LOS C to LOS D in the AM peak hour, and peak hour traffic signal warrants would be satisfied. Thus, a ***significant*** impact to the Baseline Road/Brady Lane intersection would occur under the Existing Plus Project Condition. The potential inclusion of 12 additional on-site ADUs would not result in any additional significant impacts.

Mitigation Measure(s)

Installation of a traffic signal at the Baseline Road/Brady Lane intersection or restricting left-turn movements on the northbound approach would improve operations at the intersection to acceptable (i.e., LOS C) levels. However, given that the intersection is located within the City of Roseville, outside of the County's jurisdiction, completion of the required improvements cannot be guaranteed. Furthermore, the City Engineer has indicated that the City of Roseville would not require a signal as a result of the proposed project, and restricting left turns at the intersection is not currently recommended by the City.[8] Thus, feasible mitigation to reduce the above impact to a less-than-significant level does not exist and the impact would remain *significant and unavoidable*.

[8] Mark Stout, City Engineer, City of Roseville. Personal communication [email] with KD Anderson & Associates, Inc.

14-3 Conflict with a program, plan, ordinance or policy addressing study roadway segments, substantially increase traffic in relation to the existing traffic load and capacity of the study roadway segments, or exceed an established LOS standard under Existing Plus Project conditions. Based on the analysis below, the impact is *less than significant*.

Table 14-12 below summarizes operations at each of the study roadway segments under the Existing Plus Project Condition with the proposed 119 single-family units. Table 14-13 below summarizes operations at each of the study roadway segments with the proposed 119 single-family units plus 12 additional ADUs. As shown in the tables, development of the proposed project would increase the volume of traffic along the study roadway segments. However, all study roadway segments would continue to operate within accepted Placer County minimum LOS thresholds. Therefore, impacts to study roadway segments under the Existing Plus Project Condition would be ***less than significant***. The potential inclusion of 12 on-site ADUs, in addition to the 119 single-family units, would not result in the generation of any significant impacts.

Mitigation Measure(s)

None required.

14-4 Conflict with a program, plan, ordinance or policy addressing transit, bicycle and pedestrian facilities. Based on the analysis below, the impact is *less than significant*.

The following discussion evaluates whether the proposed project would result in impacts to existing or planned pedestrian facilities, bicycle facilities, or transit facilities and services within the project area.

Pedestrian System

Future residents of the proposed project may elect to walk to and from the site to access local destinations such as the commercial development within the City of Roseville along Foothills Boulevard. In addition, school-age residents may walk to the nearby Creekview Ranch School.

As noted previously, sidewalks are currently provided on Vineyard Road from Brady Lane to Foothills Boulevard. To the northeast of the site, a sidewalk is provided along the east side of Brady Lane between Vineyard Road and Baseline Road, and on a local street that joins Brady Lane and Foothills Boulevard. With completion of the proposed frontage improvements on Brady Lane and Vineyard Road, sidewalks would be available between the project site and the Vineyard Road/Brady Lane intersection, thereby providing for pedestrian connectivity between the project site and existing facilities in the project area. The project would not conflict with regional planning for pedestrian facilities. The proposed multi-purpose trail within the open space area could potentially be extended to the north or west if/when future development occurs. The trail also advances the goals of the Dry Creek Greenway Vision.

Table 14-12
Roadway Segment LOS – Existing Plus Project Conditions

Roadway	Location	Standard			Existing			Existing Plus Project				
								Daily Volume				
		LOS	Volume Threshold Per Lane (veh/ln)	Max 2-Way Volume at LOS Standard	Daily Volume	V/C	LOS	Project Only	Total	V/C	LOS	Change in V/C
1. PFE Road	Walerga Rd to Cook Riolo Rd	D	7,750	15,500	5,300	0.21	B	35	5,335	0.21	B	0.00
2. PFE Road	Cook Riolo Rd to Antelope Rd	D	5,700	11,400	6,705	0.32	C	10	6,715	0.32	C	0.00
3. Cook Riolo Road	Baseline Rd to Vineyard Rd	D	5,700	11,400	3,705	0.18	B	15	3,720	0.18	B	0.00
4. Cook Riolo Road	Vineyard Rd to Creekview Ranch School	D	5,700	11,400	4,970	0.24	C	120	5,090	0.24	C	0.00
5. Cook Riolo Road	Creekview Ranch School to PFE Rd	D	5,700	11,400	4,475	0.21	C	50	4,525	0.22	C	0.00
6. Antelope Road	PFE Rd to Great Valley Dr	D	5,700	11,400	7,760	0.37	D	25	7,785	0.37	D	0.00
7. Vineyard Road	Crowder Ln to Cook Riolo Rd	D	5,700	11,400	2,635	0.13	B	15	2,650	0.13	B	0.00
8. Vineyard Road	Cook Riolo Rd to Brady Ln	D	5,700	11,400	4,315	0.21	C	135	4,450	0.21	C	0.00
9. Vineyard Road	Brady Ln to Foothills Blvd (R)	D	6,870	13,740	5,625	0.38	A	625	6,250	0.42	A	0.04
10. Brady Lane	Baseline Rd to Project (R)	D	5,700	11,400	1,010	0.05	A	395	1,405	0.07	A	0.02
11. Brady Lane	Project to Vineyard Rd (R)	D	5,700	11,400	1,010	0.05	A	730	1,740	0.08	B	0.03

Notes:
- All study roadways are two lanes.
- **Bold** values exceed minimum LOS threshold.
- **Highlighted** values are a significant impact.
- (R) is City of Roseville jurisdiction.

Source: KD Anderson & Associates, Inc.

Table 14-13
Roadway Segment LOS – Existing Plus Project Conditions: With 12 ADUs

Roadway	Location	Standard			Existing			Existing Plus Project Plus 12 ADUs				
								Daily Volume				
		LOS	Volume Threshold Per Lane (veh/ln)	Max 2-Way Volume at LOS Standard	Daily Volume	V/C	LOS	Project + ADUs Only	Total	V/C	LOS	Change in V/C
1. PFE Road	Walerga Rd to Cook Riolo Rd	D	7,750	15,500	5,300	0.21	B	37	5,337	0.21	B	0.00
2. PFE Road	Cook Riolo Rd to Antelope Rd	D	5,700	11,400	6,705	0.32	C	12	6,717	0.32	C	0.00
3. Cook Riolo Road	Baseline Rd to Vineyard Rd	D	5,700	11,400	3,705	0.18	B	15	3,720	0.18	B	0.00
4. Cook Riolo Road	Vineyard Rd to Creekview Ranch School	D	5,700	11,400	4,970	0.24	C	128	5,098	0.24	C	0.00
5. Cook Riolo Road	Creekview Ranch School to PFE Rd	D	5,700	11,400	4,475	0.21	C	54	4,529	0.22	C	0.00
6. Antelope Road	PFE Rd to Great Valley Dr	D	5,700	11,400	7,760	0.37	D	27	7,787	0.37	D	0.00
7. Vineyard Road	Crowder Ln to Cook Riolo Rd	D	5,700	11,400	2,635	0.13	B	17	2,651	0.13	B	0.00
8. Vineyard Road	Cook Riolo Rd to Brady Ln	D	5,700	11,400	4,315	0.21	C	144	4,459	0.21	C	0.00
9. Vineyard Road	Brady Ln to Foothills Blvd (R)	D	6,870	13,740	5,625	0.38	A	673	6,298	0.42	A	0.04
10. Brady Lane	Baseline Rd to Project (R)	D	5,700	11,400	1,010	0.05	A	426	1,436	0.07	A	0.02
11. Brady Lane	Project to Vineyard Rd (R)	D	5,700	11,400	1,010	0.05	A	787	1,797	0.09	B	0.03

Notes:
- All study roadways are two lanes.
- **Bold** values exceed minimum LOS threshold.
- **Highlighted** values are a significant impact.
- (R) is City of Roseville jurisdiction.

Source: KD Anderson & Associates, Inc.

While a continuous pedestrian route would not be available between the project site and the Creekview Ranch School, bussing would be available to students. The project would include a new school bus turnout along the west side of Brady Lane, south of the project site access. Therefore, a less-than-significant impact would occur.

Bicycle Facilities

As discussed previously, dedicated bicycle facilities are currently provided on Baseline Road, as well as Vineyard Road east of Brady Lane. Bicycle facilities are not provided on Brady Lane or on the County roads to the west of the site along Vineyard Road. As part of the project, Vineyard Road would be widened to accommodate one-half of a future 14-foot, two-way, left-turn lane, one 12-foot through lane, and a new Class II bike lane along the project frontage, consistent with the Placer County Regional Bikeway Plan. With future construction of the Class II bike lane, continuous bike facilities would be provided between the project site and the existing facilities along Vineyard Road to the east. Therefore, the proposed project would not conflict with planned bicycle facilities identified in adopted plans, and a less-than-significant impact would occur.

Transit System

As noted previously, transit service in the vicinity of the project site is currently provided by Roseville Transit. The nearest bus stop is located at Baseline Road and Foothills Boulevard, approximately 0.75-mile from the project site. In addition, the project includes a school bus turnout along the west side of Brady Lane, south of the project site access. Inclusion of a proposed bus turnout would provide sufficient infrastructure to allow for school buses to service the project site and nearby residences. Currently, future transit routes are not identified along Vineyard Road, however, the DCWPCP notes that routes could be extended to serve future growth in the project area if warranted by demand. Thus, the project would not conflict with any planning efforts related to public transit. Furthermore, while residents of the project may result in a slight increase in demand on existing transit services in the region, per the Traffic Impact Study, such demand is unlikely to cause an appreciable change in system ridership, and the project would not degrade transit operations. Thus, a less-than-significant impact would occur.

Conclusion

Based on the above, the proposed project would not conflict with adopted policies, plans, or programs supporting alternative transportation (i.e., bus turnouts, bicycle lanes, bicycle racks, public transit, pedestrian facilities, etc.). Thus, the project would result in a ***less-than-significant*** impact to pedestrian, bicycle, and transit facilities under Existing Plus Project conditions.

Mitigation Measure(s)

None required.

14-5 Substantially increase hazards to vehicle safety due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). Based on the analysis below, the impact is *less than significant*.

Potential impacts related to gated access at project entrances, roadway design features, and incompatible uses are discussed below.

Gated Access

The proposed project would include gated access at the project entry along Brady Lane. While such a feature does not normally affect the quality of traffic flow on the adjoining street system and is not anticipated to affect the LOS at the project access, safety issues could arise if traffic queues back from the gates. As such, the Traffic Impact Analysis includes an evaluation of traffic queues at the gated project access.

Placer County has adopted a design standard for gated access to residential subdivisions (Plate 115). The proposed gates would likely employ a system to monitor the approach of residents using "proximity tags", or an in-vehicle push-button key to automatically open the gates as the resident's vehicle arrives. Visitors would manually punch in a gate code. The type of gate to be used at the entrances would be a metal swing gate. Per the Traffic Impact Analysis, the following five key design features would affect the adequacy of access design:

- Available distance for storage from the gates back to the edge of the travel way (PFE Road and Antelope Road);
- Available storage for guest vehicles from the push-button point back to the travel way;
- Length of time required for a resident to activate the gate and for the gate to open;
- Length of time required for the system to identify a visitor and to activate the gate; and
- External factors that could create platoons of inbound traffic, such as adjoining signalized access.

Storage Distance

The median islands, where the push button for the gate actuation would be located, would be situated approximately 60 feet from Brady Lane, and the gate would be located approximately 120 feet from Brady Lane. Assuming 25 feet per vehicle, the gate queuing area could accommodate four to five waiting vehicles. Pedestrians would be able to bypass waiting vehicles to access the site through dedicated pedestrian entrances.

Gate Activation and Opening Assumptions

A resident's proximity tag or push button would be detected by the system as a vehicle approaches the gate. From the time the system is activated, a metal swing gate would move at 1.2 to 2.0 feet per second and would require 11 to 18 seconds to open a 14-foot to 16-foot swing gate, depending on the size of the operator mechanism. In-pavement magnetic loop detectors located on both sides of the gate would ensure that the swing gate would remain open for any following vehicles. Visitors would call for access, or input a code number to activate the gate, but may be less familiar with its operation than

residents. The additional time required for a visitor to activate the system could add five to 10 seconds to the time expected for a resident.

Technical Approach

Vehicles are expected to generally arrive randomly and the number of vehicles queuing behind the proposed gate can be based on the overall inbound traffic demand, the overall capacity flow rate through the gate and the passage time for subsequent vehicles following the first vehicle. For a combination of resident vehicles and an occasional visitor vehicle (i.e., 10 percent of visitors), the average time needed for the system to detect a vehicle and fully open the gate would be no more than 20 seconds, which implies a capacity for 180 openings per hour. The probability of a queue of any length can be determined using standard queue theory, and in this case the length of queue occurring at the 95th percentile level is the determining factor.

Per the Traffic Impact Analysis, the worst PM peak hour inbound traffic forecast at the Brady Lane entrance would be 74 vehicles. During the PM peak hour, the probability of zero vehicle queuing is 59 percent, the probability of a queue of one vehicle or less is 83 percent, and the probability of a two-vehicle queue or less is 93 percent. The probability of three vehicles or less during the PM peak hour would be approximately 97 percent. Given the project access point would be capable of accommodating up to four vehicles, the presence of the gates at the access points would not pose an appreciable safety problem.

Roadway Design Features and Incompatible Uses

The proposed project would not include any new sharp curves or dangerous intersections and would not be located in the vicinity of any such roadway features. The proposed project would include a number of improvements to Brady Lane and Vineyard Road along the project frontages. The Brady Lane improvements would be consistent with the City of Roseville design standards, while the Vineyard Road improvements would meet Placer County standards. In addition, the design of the on-site circulation system would not involve any features that would increase traffic hazards at the site. The project identification monument at the project access would be required to be placed outside of all roadway and utility easements, as well as the sight distance triangle of the access.

All roadway improvements would be designed consistent with applicable Placer County standards. Furthermore, the proposed project would not introduce incompatible uses, such as heavy-duty truck traffic, to area roadways during operations. Potential impacts related to project construction traffic are discussed under Impact 14-1 above.

Conclusion

Based on the above, the proposed gated access point at Brady Lane would not create a substantial vehicle safety risk. The proposed internal circulation system and off-site roadway improvements would be designed to minimize hazardous roadway design features, and the project would not introduce incompatible uses to area roadways. Therefore, a ***less-than-significant*** impact would occur.

Mitigation Measure(s)

None required.

14-6 Result in inadequate emergency access or access to nearby uses. Based on the analysis below, the impact is *less than significant*.

Several factors determine whether a project has sufficient access for emergency vehicles, including the following:

1. Number of access points (both public and emergency access only);
2. Width of access points; and
3. Width of internal roadways.

The proposed project would include two access points for emergency vehicles: a dedicated EVA at the southern site boundary along Vineyard Road, and the primary site access at Brady Lane. The EVA, as well as the proposed private internal roadways, would be designed consistent with applicable Placer County standards. The Brady Lane access would be subject to City of Roseville standards. In addition, the proposed gated access at Brady Lane would be required to comply with the emergency vehicle access conditions established by Section 15.04.580 of the Placer County Code. As such, the internal roadways would comply with applicable Placer County and City of Roseville standards for roadway widths, and emergency vehicles would be afforded unimpeded access to the site. In addition, the proposed roadway improvements, including widening of Brady Lane and Vineyard Road, would not impede access to existing nearby uses. A ***less-than-significant*** impact would occur.

Mitigation Measure(s)

None required.

Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, "cumulative impacts" refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

It should be noted that increased traffic volumes on local roadway facilities under cumulative conditions would not substantially alter performance related to bicycle facilities, pedestrian facilities, transit facilities and services, and emergency vehicle access. Rather, impacts to such facilities under Cumulative Plus Project conditions would be identical to those discussed above under Impact 14-4. In addition, construction activities associated with the project would be complete prior to the cumulative analysis year. Therefore, such topics are not discussed further in the cumulative analysis presented herein.

Cumulative Assumptions

The regional traffic model last updated for the Placer Vineyards Specific Plan EIR was selected as the most valid source of future background traffic volumes in the study area at locations in Placer County. The model reflects current land use assumptions for development in the DCWPCP area. As part of the Traffic Impact Analysis, the traffic model was run and forecasts were made for the Cumulative No Project scenario. The Cumulative Plus Project condition was identified by

manually adding the proposed project's trips to the No Project condition based on the regional distribution pattern derived from the traffic model.

Alternative assumptions were made for two locations within the City of Roseville and addressed by the City Year 2035 CIP traffic model. The Year 2035 Plus Amoruso Project traffic volume forecasts contained in the Amoruso Ranch DEIR traffic study were employed as the base Cumulative No Project conditions at the Foothills Boulevard/Baseline Road and Foothills Boulevard/Vineyard Road intersections.

The presence of other recent development projects that have not been addressed in the County's regional traffic model was considered in consultation with Placer County staff. For example, traffic volumes associated with the approved Placer County Sports and Event Center project were manually added to the background cumulative traffic volume forecasts. Trips associated with the Midweek Evening Volleyball Practice Scenario, as well as trips associated with the planned culinary facility, were assigned to the study area street system based on the distribution assumptions made in the Placer County Sports and Event Center EIR.

It should be noted that some study intersections will be improved under cumulative conditions based on projects already included in the County's CIP or City of Roseville 2035 CIP. Such improvements are detailed in the Traffic Impact Study (see Appendix K). The County CIP includes funds for improvements to Cook Riolo Road, from PFE Road to Baseline Road, and for Vineyard Road, from Crowder Lane to Foothills Boulevard, although the nature of such improvements is not defined. Table 14-14 provides a summary of the roadway geometries and classifications assumed to occur under cumulative conditions. All planned roadway improvements for which funding and timing has been identified were included in both the Cumulative No Project and Cumulative Plus Project conditions evaluated herein.

Table 14-14
Cumulative Roadway Geometry/Classification

Roadway	Segment	Classification	Lanes
PFE Rd	Watt Ave to Walerga Rd	Arterial – Low Access Control	4
	Walerga Rd to Cook Riolo Rd	Arterial – Low Access Control	2
	Cook Riolo Rd to Antelope Rd	Arterial – Low Access Control	2
	Antelope Rd to Hilltop Rd	Arterial – Moderate Access Control	4
Cook Riolo Rd	Baseline Rd to Vineyard Rd	Arterial – Low Access Control	2
	Vineyard Rd to Creekview Ranch School	Arterial – Low Access Control	2
	Creekview Ranch School to PFE Rd	Arterial – Low Access Control	2
Vineyard Rd	Crowder Ln to Cook Riolo Rd	Arterial – Low access Control	2
	Cook Riolo Rd to Brady Ln	Arterial – Low Access Control	2
Antelope Rd	PFE Rd to Great Valley Dr	Arterial – Moderate Access Control	4

Source: KD Anderson & Associates, Inc.

14-7 Conflict with a program, plan, ordinance or policy addressing study intersections, substantially increase traffic in relation to the planned future year traffic load and capacity of the study intersections, or exceed an established LOS standard under Cumulative Plus Project conditions. Based on the analysis below,

impacts to all study intersections under Cumulative Plus Project Conditions would be less than significant, with the exception of the Baseline Road / Brady Lane, Cook Riolo Road / Vineyard Road, and Vineyard Road / Brady Lane intersections. Even with mitigation, the project's incremental contribution to the significant cumulative impacts at the intersections would be *cumulatively considerable* and *significant and unavoidable*.

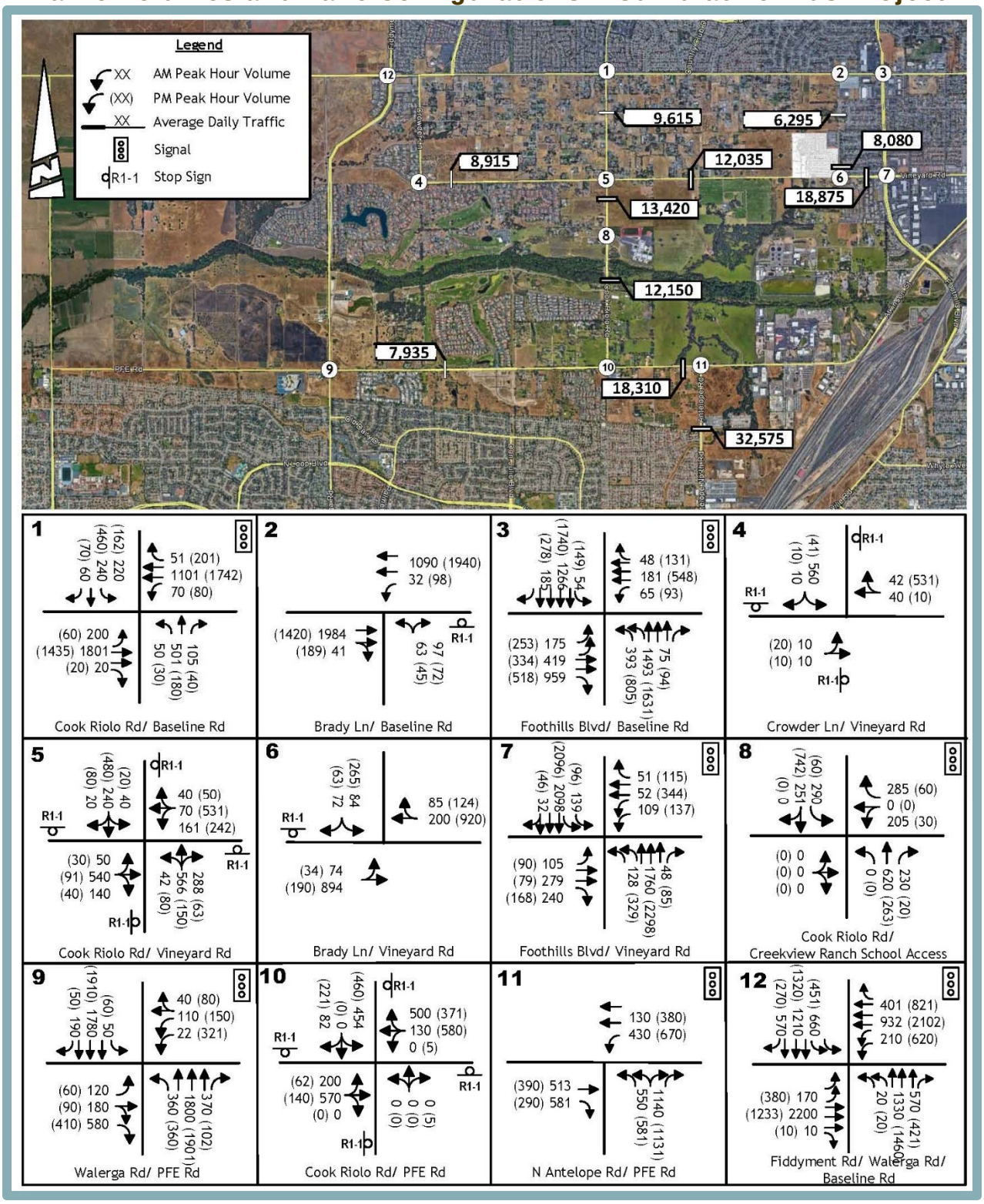
Figure 14-8 displays the Cumulative Plus Project conditions traffic volumes at each study intersection for both AM and PM peak hours. Table 14-15 below summarizes operations at each of the study intersections with the proposed 119 single-family units. Table 14-16 below summarizes operations at each of the study intersections with the proposed 119 single-family units plus 12 additional ADUs. As shown in the tables, the following study intersections operate unacceptably under Cumulative No Project conditions; the remaining intersections will operate acceptably:

1. Baseline Road/Cook Riolo Road/Woodcreek Oaks Boulevard (City of Roseville);
2. Baseline Road/Brady Lane (City of Roseville);
3. Baseline Road/Foothills Boulevard (City of Roseville);
5. Cook Riolo Road/Vineyard Road;
6. Vineyard Road/Brady Lane;
9. PFE Road/Walerga Road;
10. PFE Road/Cook Riolo Road;
11. PFE Road/Antelope Road;
12. Baseline Road/Walerga Road/Fiddyment Road (City of Roseville).

The proposed project would not result in degradation of any intersection from an acceptable LOS to an unacceptable LOS under Cumulative Plus Project conditions. Because the intersections listed above are already deficient under Cumulative No Project conditions, the project's impact is determined based on the following criteria, as shown on pages 4-22 and 4-24 of this chapter:

- Placer County Facilities
  - Signalized Intersections
    - Increase in V/C of 0.05 (5 percent) or greater; or
    - Increase in overall average intersection delay of 4.0 seconds or greater.
  - Unsignalized Intersections
    - MUTCD traffic signal warrant(s) met; and
    - Increase in delay of 5.0 seconds or more with the project.
- City of Roseville Facilities
  - Signalized Intersections
    - For intersections that currently operate at LOS D or E: cause operations to further worsen by one or more service levels;

Figure 14-8
Traffic Volumes and Lane Configurations – Cumulative Plus Project



Source: KD Anderson & Associates, Inc.

Table 14-15
Intersection LOS – Cumulative Plus Project Conditions

Location	Control	AM Peak Hour				PM Peak Hour				Traffic Signal Warrant Met?
		Cumulative No Project		Cumulative Plus Project		Cumulative No Project		Cumulative Plus Project		
		LOS	Average Delay or V/C	LOS	Average Delay or V/C	LOS	Average Delay or V/C	LOS	Average Delay or V/C	
1. Baseline Rd/Cook Riolo Rd/Woodcreek Oaks Blvd (R)	Signal	**F**	**97.5**	**F**	**98.0**	**D**	**54.5**	**D**	**54.5**	N/A
2. Baseline Rd/Brady Ln (R) Northbound approach Westbound left turn	NB Stop	F C	**>300** 22.0	F C	**>300** 22.0	**F** C	**>300** 17.5	**F** **C**	**>300** 18.5	YES
	Signal and 2nd EB thru lane	*B*	*17.0*	*B*	*18.0*	*B*	*10.0*	*B*	*12.0*	
3. Baseline Rd/Foothills Blvd (R)	Signal	**D**	**46.5**	**D**	**46.5**	**D**	**50.0**	**D**	**50.5**	N/A
4. Vineyard Rd/Crowder Ln (overall)* Southbound approach Eastbound left turn	SB Stop	(C) C A	(17.0) 17.0 7.5	(C) C A	(17.0) 17.0 7.5	(B) B A	(11.5) 12.0 9.0	(B) B A	(11.5) 12.0 9.0	No
5. Cook Riolo Rd/Vineyard Rd	AWS	**F**	**>300**	**F**	**(>300)**	**F**	**294.5**	**F**	**297.5**	YES
	Roundabout (1)	***F***	***102.5***			***F***	***57.0***			
	Roundabout (2)	*C*	*15.0*	*C*	*16.0*	*B*	*11.5*	*B*	*11.5*	
6. Vineyard Rd/Brady Ln	AWS	**F**	**160.5**	**F**	**191.5**	**F**	**248.5**	**F**	**292.5**	YES
	Roundabout (1)	*B*	*12.0*	*B*	*13.5*	*C*	*15.5*	*C*	*18.0*	
	Signal	*A*	*8.5*	*B*	*10.0*	*D*	*36.5*	*D*	*50.5*	
7. Vineyard Rd/Foothills Blvd (R)	Signal	C	32.5	C	34.5	C	31.5	C	33.5	N/A
8. Cook Riolo Rd/Creekview Ranch School	Signal	D	36.5	D	46.0	A	7.0	A	7.0	N/A
9. PFE Rd/Walerga Rd	Signal	**F**	**80.0**	**F**	**80.0**	**F**	**86.5**	**F**	**86.5**	N/A
10. PFE Road/Cook Riolo Rd	AWS	**F**	**281.0**	**F**	**282.0**	**F**	**>300**	**F**	**>300**	YES
	Roundabout (1)	*C*	*19.5*	*C*	*20.0*	*B*	*14.0*	*B*	*14.0*	
11. PFE Rd/Antelope Rd	Signal	**F**	**176.0**	**F**	**176.0**	**F**	**170.0**	**F**	**170.0**	N/A
12. Baseline Rd/Walerga Rd/Fiddyment Rd (R)	Signal	**F**	**116.5**	**F**	**116.5**	**F**	**115.0**	**F**	**115.5**	N/A

(Continued on next page)

Table 14-15
Intersection LOS – Cumulative Plus Project Conditions

Location	Control	AM Peak Hour				PM Peak Hour				Traffic Signal Warrant Met?
		Cumulative No Project		Cumulative Plus Project		Cumulative No Project		Cumulative Plus Project		
		LOS	Average Delay or V/C	LOS	Average Delay or V/C	LOS	Average Delay or V/C	LOS	Average Delay or V/C	
13. Brady Ln/Project Access (overall)* Eastbound approach Northbound left turn	EB Stop	-	-	(A) A A	(9.1) 9.5 7.5	-	-	(A) B A	(9.5) 11.0 8.0	No

Notes:
- (R) indicates City of Roseville jurisdiction. Minimum LOS C standard applies.
- **Bold** indicates minimum LOS threshold exceeded; **Highlighted** values indicate a significant impact.
- Overall Average Delay = Σ (Delay x Volume of each delayed movement) / Σ Volume of each delayed movement.

Source: KD Anderson & Associates, Inc.

Table 14-16
Intersection LOS – Cumulative Plus Project Conditions: With 12 ADUs

Location	Control	AM Peak Hour				PM Peak Hour				Traffic Signal Warrant Met?
		Cumulative No Project		Cumulative Plus Project		Cumulative No Project		Cumulative Plus Project		
		LOS	Average Delay or V/C	LOS	Average Delay or V/C	LOS	Average Delay or V/C	LOS	Average Delay or V/C	
1. Baseline Rd/Cook Riolo Rd/Woodcreek Oaks Blvd (R)	Signal	**F**	**97.5**	**F**	**98.0**	**D**	**54.5**	**D**	**54.5**	N/A
2. Baseline Rd/Brady Ln (R) Northbound approach Westbound left turn	NB Stop	F C	**>300** 22.0	F C	**>300** 22.0	**F** C	**>300** 17.5	**F** **C**	**>300** 18.5	YES
	Signal and 2nd EB thru lane	*B*	*17.0*	*B*	*18.0*	*B*	*10.0*	*B*	*12.0*	
3. Baseline Rd/Foothills Blvd (R)	Signal	**D**	**46.5**	**D**	**46.5**	**D**	**50.0**	**D**	**50.5**	N/A
4. Vineyard Rd/Crowder Ln (overall)* Southbound approach Eastbound left turn	SB Stop	(C) C A	(17.0) 17.0 7.5	(C) C A	(17.0) 17.0 7.5	(B) B A	(11.5) 12.0 9.0	(B) B A	(11.5) 12.0 9.0	No
5. Cook Riolo Rd/Vineyard Rd	AWS	**F**	**>300**	**F**	**(>300)**	**F**	**294.5**	**F**	**297.5**	YES
	Roundabout (1)	***F***	***102.5***			***F***	***57.0***			
	Roundabout (2)	*C*	*15.0*	*C*	*16.0*	*B*	*11.5*	*B*	*11.5*	
6. Vineyard Rd/Brady Ln	AWS	**F**	**160.5**	**F**	**194.5**	**F**	**248.5**	**F**	**295.0**	YES
	Roundabout (1)	*B*	*12.0*	*B*	*13.5*	*C*	*15.5*	*C*	*18.0*	
	Signal	*A*	*8.5*	*B*	*10.0*	*D*	*36.5*	*D*	*50.5*	
7. Vineyard Rd/Foothills Blvd (R)	Signal	C	32.5	C	34.5	C	31.5	C	33.5	N/A
8. Cook Riolo Rd/Creekview Ranch School	Signal	D	36.5	D	47.0	A	7.0	A	7.0	N/A
9. PFE Rd/Walerga Rd	Signal	**F**	**80.0**	**F**	**80.0**	**F**	**86.5**	**F**	**86.5**	N/A
10. PFE Road/Cook Riolo Rd	AWS	**F**	**281.0**	**F**	**282.0**	**F**	**>300**	**F**	**>300**	YES
	Roundabout (1)	*C*	*19.5*	*C*	*20.0*	*B*	*14.0*	*B*	*14.0*	
11. PFE Rd/Antelope Rd	Signal	**F**	**176.0**	**F**	**176.0**	**F**	**170.0**	**F**	**170.0**	N/A
12. Baseline Rd/Walerga Rd/Fiddyment Rd (R)	Signal	**F**	**116.5**	**F**	**116.5**	**F**	**115.0**	**F**	**115.5**	N/A

(Continued on next page)

Table 14-16
Intersection LOS – Cumulative Plus Project Conditions: With 12 ADUs

Location	Control	AM Peak Hour				PM Peak Hour				Traffic Signal Warrant Met?
		Cumulative No Project		Cumulative Plus Project		Cumulative No Project		Cumulative Plus Project		
		LOS	Average Delay or V/C	LOS	Average Delay or V/C	LOS	Average Delay or V/C	LOS	Average Delay or V/C	
13. Brady Ln/Project Access (overall)* Eastbound approach Northbound left turn	EB Stop	-	-	(A) A A	(9.1) 9.5 7.5	-	-	(A) B A	(9.5) 11.0 8.0	No

Notes:
- (R) indicates City of Roseville jurisdiction. Minimum LOS C standard applies.
- **Bold** indicates minimum LOS threshold exceeded; **Highlighted** values indicate a significant impact.
- Overall Average Delay = Σ (Delay x Volume of each delayed movement) / Σ Volume of each delayed movement.

Source: KD Anderson & Associates, Inc.

- For intersections that currently operate at LOS F: cause intersection delay to worsen by 12.5 seconds or greater; or
- Cause the overall percentage of signalized intersections throughout the City of Roseville operating at LOS C or better during the AM and PM peak hours to fall below 70 percent.

o Unsignalized Intersections

- For intersections currently (or projected to be) operating at less than LOS C, cause operations to further worsen by one or more service levels and meet the MUTCD peak hour signal warrant; or
- For intersections currently (or projected to be) operating at LOS F, cause intersection delay to worsen by 12.5 seconds or greater and meet the MUTCD peak hour signal warrant.

The following sections provide an analysis of potential impacts related to operations at the listed intersections.

Baseline Road/Cook Riolo Road/Woodcreek Oaks Boulevard (Roseville)

In the City of Roseville, the Baseline Road/Cook Riolo Road/Woodcreek Oaks Boulevard intersection would operate at LOS F in the AM peak hour and LOS D in the PM peak hour with and without the project. The project would increase average vehicle delay by 0.5-second during the AM peak hour; during the PM peak hour, delay would not increase. Because the incremental increase in delay resulting from the project is less than the applicable 12.5 second standard employed by the City of Roseville, under City of Roseville policy, the project's incremental contribution to the cumulative impact would be less than significant.

Baseline Road/Brady Lane (Roseville)

In the City of Roseville, Baseline Road/Brady Lane is projected to operate at LOS F during the AM and PM peak hours with and without the project. The maximum incremental increase in side street delay resulting from the addition of project traffic would be approximately 149 seconds, which exceeds the measure applied for Roseville intersections. In addition, traffic signal warrants would continue to be met. Thus, the project's incremental contribution to the cumulative impact would be cumulatively considerable.

Baseline Road/Foothills Boulevard (Roseville)

In the City of Roseville, the Baseline Road/Foothills Boulevard intersection is projected to operate at LOS D during the AM and PM peak hours with and without the project. However, as noted previously, LOS D is considered acceptable for the intersection per the City. Thus, a less-than-significant cumulative impact would occur.

Cook Riolo Road/Vineyard Road

In Placer County, the Cook Riolo Road/Vineyard Road intersection is projected to operate at LOS F in the AM and PM peak hours with and without the project. Because conditions in excess of LOS D are projected with and without the project, the significance of project impact is based on the incremental change in delay caused by the project. The incremental increase in delay occurring as a result in the project would exceed the 5.0 second standard established by the DCWPCP and, thus, the project's incremental contribution to the cumulative impact would be cumulatively considerable.

Vineyard Road/Brady Lane

In Placer County, the Vineyard Road/ Brady Lane intersection is projected to operate at LOS F during the AM and PM peak hours with and without the project. Because conditions in excess of LOS D are projected with and without the project, the significance of project impact is based on the incremental change in delay caused by the project. The incremental increase in delay occurring as a result of the project would exceed the 5.0 second standard established by the DCWPCP and, thus, the project's incremental contribution to the cumulative impact would be cumulatively considerable.

PFE Road/Walerga Road

In Placer County, the PFE Road/Walerga Road intersection is projected to operate at LOS F in the AM and PM peak hours; however, such conditions are considered acceptable per Goal 6 in the Transportation and Circulation Element of the DCWPCP. In addition, the project would not increase average vehicle delay during either peak hour. Thus, the project's incremental contribution to the cumulative impact would be less than cumulatively considerable.

PFE Road/Cook Riolo Road

In Placer County, the PFE Road/Cook Riolo Road intersection is projected to operate at LOS F in both the AM and PM peak hours; however, such conditions are considered acceptable per Goal 6 in the Transportation and Circulation Element of the DCWPCP. In addition, the increase in delay at the intersection would be below the County's five-second threshold. Thus, the project's incremental contribution to the cumulative impact would be less than cumulatively considerable.

PFE Road/Antelope Road

In Placer County, the PFE Road/Antelope Road intersection is projected to operate at LOS F in the AM and PM peak hours; however, such conditions are considered acceptable per Goal 6 in the Transportation and Circulation Element of the DCWPCP. In addition, the project would not increase average vehicle delay during either peak hour. Thus, the project's incremental contribution to the cumulative impact would be less than cumulatively considerable.

Baseline Road/Walerga Road/Fiddyment Road (Roseville)

In the City of Roseville, the Baseline Road/Walerga Road/Fiddyment Road intersection would operate at LOS F during the AM and PM peak hours with and without the project. Per the City, LOS D is considered acceptable for this intersection. However, the project would increase average vehicle delay by 0.5-second during the PM peak hour; during the AM peak hour, delay would not increase. Because the incremental increase in delay resulting from the project is less than the applicable 12.5 second standard employed by the City of Roseville, the project's incremental contribution to the cumulative impact would be less than significant under City of Roseville policy.

Conclusion

Based on the above, the project would not conflict with applicable County or City thresholds at the Baseline Road/Cook Riolo Road/Woodcreek Oaks Boulevard, PFE Road/Walerga Road, PFE Road/Cook Riolo Road, PFE Road/Antelope Road, or Baseline Road/Walerga Road/Fiddyment Road intersections. However, the addition of project

traffic under Cumulative Plus Project conditions could contribute to significant cumulative impacts at the following study intersections:

2. Baseline Road/Brady Lane (City of Roseville);
5. Cook Riolo Road/Vineyard Road; and
6. Vineyard Road/Brady Lane.

Therefore, under Cumulative Plus Project Conditions, the proposed project's incremental contribution to cumulative impacts could be ***cumulatively considerable***. The potential inclusion of 12 additional on-site ADUs would not result in any additional significant impacts.

Mitigation Measure(s)

The following sections provide a discussion of potential circulation system improvements to address impacts to the three study intersections listed above, and the reasons for their infeasibility.

Baseline Road/Brady Lane

As discussed for Impact 14-2, the impact to this intersection would require either installation of a traffic signal at the Baseline Road/Brady Lane intersection or restricting left-turn movements on the northbound approach, both of which would improve operations at the intersection to acceptable (i.e., LOS C) levels. However, as discussed under Impact 14-2 above, given that the intersection is located within the City of Roseville, outside of the County's jurisdiction, completion of the required improvements cannot be guaranteed. Furthermore, the City Engineer has indicated that the City of Roseville would not require a signal as a result of the proposed project, and restricting left turns at the intersection is not currently recommended by the City.[9] Thus, the impact would remain significant and unavoidable.

Cook Riolo Road/Vineyard Road

Installation of a two-lane roundabout would improve operations to an acceptable LOS for both the AM and PM peak hours. However, this type of capacity enhancement is not included in the County's CIP for the DCWPCP area and would not be consistent with the DCWPCP. Thus, the impact would remain significant and unavoidable.

Vineyard Road/Brady Lane

Installation of a single-lane roundabout would improve operations to an acceptable LOS (LOS C or better) for both the AM and PM peak hours. Such an improvement is suggested in the DCWPCP, but is not included in the County's CIP for the DCWPCP area. While the County may elect to include installation of a roundabout at the Vineyard Road/Brady Lane intersection in the CIP in the future, inclusion of the improvement cannot be guaranteed. Thus, the impact would remain significant and unavoidable.

Conclusion

The Baseline Road/Brady Lane is located outside of the County's jurisdiction, and completion of the required improvements is not currently recommended by the City of Roseville. For the Cook Riolo Road/Vineyard Road and Vineyard Road/Brady Lane

[9] Mark Stout, City Engineer, City of Roseville. Personal communication [email] with KD Anderson & Associates, Inc.

intersections, the required improvements are not included in the County's CIP and, thus, completion of the improvements cannot be guaranteed. Therefore, even with payment of applicable traffic impact fees, the project's incremental contribution to the cumulative impacts at the affected intersections would remain *cumulatively considerable* and *significant and unavoidable*.

14-7(a) *Prior to issuance of any Building Permits, this project shall be subject to the payment of traffic impact fees that are in effect in this area (Dry Creek), pursuant to applicable Ordinances and Resolutions. The applicant is notified that the following traffic mitigation fee(s) shall be required and shall be paid to Placer County DPWF:*

A. County Wide Traffic Limitation Zone: Article 15.28.010, Placer County Code;
B. South Placer Regional Transportation Authority (SPRTA);
C. "Bizz Johnson" Highway Interchange Joint Powers Authority; and
D. Placer County / City of Roseville JPA (PC/CR).

The current total combined estimated fee is $593,810 (based on $4,877 per single family residential dwelling unit). An additional amount of $37,125.60 (based on $3,093.80 per accessory dwelling unit) would be added to the total fee if the additional 12 secondary units are included with the project. The fees were calculated using the information supplied. If either the use or the number of units changes, then the fees will change. The fees to be paid shall be based on the fee program in effect at the time the application is deemed complete.

14-7(b) *Prior to Improvement Plan approval, the applicant shall pay their fair share contribution toward the cost of constructing a future one-lane roundabout at the intersection of Brady Lane and Vineyard Road. The applicant shall develop an engineer's cost estimate for said improvement and submit the estimate to the ESD/DPW for review and approval in order to determine the total dollar amount owed. The applicant's fair share has been identified as 6.9 percent.*

If the Placer County CIP is updated to include the one-lane roundabout improvement at the intersection of Brady Lane and Vineyard Road, then the payment of the Countywide Traffic Mitigation Fee at Building Permit issuance, as required in Mitigation Measure 14-7(a) will satisfy this fair share contribution requirement.

14-8 Conflict with a program, plan, ordinance or policy addressing study roadway segments, substantially increase traffic in relation to the planned future year traffic load and capacity of the study roadway segments, or exceed an established LOS standard under Cumulative Plus Project conditions. Based on the analysis below, the impact is *less than cumulatively considerable*.

Table 14-17 below summarizes operations at each of the study roadway segments under the Cumulative Plus Project Condition with the proposed 119 single-family units. Table 14-18 below summarizes operations at each of the study roadway segments with the proposed 119 single-family units plus 12 additional ADUs. As shown in the tables, the segment of PFE Road from Cook Riolo Road to Antelope Road would operate unacceptably (LOS F) with and without the project. In addition, the segment of Antelope Road from PFE Road to Great Valley Drive would operate unacceptably (LOS E) with and without the project. Both roadway segments are located within Placer County. All other study roadway segments would operate acceptably under Cumulative Plus Project conditions.

Because the two unacceptable study roadway segments noted above are already deficient under Cumulative No Project conditions, the project's impact is determined based on whether the addition of project traffic would increase V/C ratio by 0.05 or greater or result in an increase in ADT of 100 or more project-generated vehicle trips per lane (vpl). The following sections provide an analysis of potential impacts related to operations at the two study roadway segments.

PFE Road from Cook Riolo Road to Antelope Road

PFE Road from Cook Riolo Road to Antelope Road will operate at LOS F with and without the project. While the DCWPCP accepts LOS F on this segment, because the incremental change in V/C does not exceed the 0.05 significance threshold and the incremental increase in volume is less than the 100 daily vehicles per lane threshold allowed under County guidelines, the project's incremental contribution to the cumulative impact would be less than cumulatively considerable.

Antelope Road from PFE Road to Great Valley Drive

Antelope Road from PFE Road to Great Valley Drive is projected to operate at LOS E. The DCWPCP accepts LOS E on this roadway. Because the incremental change in V/C does not exceed the 0.05 significance threshold and the incremental increase in volume is less than the 100 daily vehicles per lane threshold allowed under County guidelines, the project's incremental contribution to the cumulative impact would be less than cumulatively considerable.

Table 14-17
Roadway Segment LOS – Cumulative Plus Project Conditions

Roadway	Location	Standard			Cumulative No Project			Cumulative Plus Project				
								Daily Volume				
		LOS	Volume Threshold Per Lane (veh/ln)	Max 2-Way Volume at LOS Standard	Daily Volume	V/C	LOS	Project Only	Total	V/C	LOS	Change in V/C
1. PFE Road	Walerga Rd to Cook Riolo Rd	D	6,870	13,740	7,900	0.53	A	35	7,935	0.53	A	0.00
2. PFE Road	Cook Riolo Rd to Antelope Rd	**F**	**6,870**	**13,740**	**18,300**	**1.22**	**F**	**10**	**18,310**	**1.22**	**F**	**0.00**
3. Cook Riolo Road	Baseline Rd to Vineyard Rd	F	6,870	13,740	9,600	0.64	B	15	9,615	0.64	B	0.00
4. Cook Riolo Road	Vineyard Rd to Creekview Ranch School	F	6,870	13,740	13,300	0.89	D	120	13,420	0.89	D	0.01
5. Cook Riolo Road	Creekview Ranch School to PFE Rd	F	6,870	13,740	12,100	0.81	D	50	12,150	0.81	D	0.00
6. Antelope Road	PFE Rd to Great Valley Dr	**E**	18,000[2]	36,000	**32,550**	**0.90**	**E**	**25**	**32,575**	**0.91**	**E**	**0.01**
7. Vineyard Road	Crowder Ln to Cook Riolo Rd	D	6,870	13,740	8,900	0.59	A	15	8,915	0.59	A	0.00
8. Vineyard Road	Cook Riolo Rd to Brady Ln	D	6,870	13,740	11,900	0.79	C	135	12,035	0.80	D	0.01
9. Vineyard Road	Brady Ln to Foothills Blvd (R)	D	7,500	15,000	18,250	1.22	F	625	18.875	1.26	F	0.04
10. Brady Lane	Baseline Rd to Project (R)	D	5,700	11,400	5,900	0.28	C	395	6,295	0.30	C	0.02
11. Brady Lane	Project to Vineyard Rd (R)	D	5,700	11,400	7,360	0.35	C	730	8,090	0.39	D	0.04

Notes:
- All study roadways are two lanes.
- **Bold** values exceed minimum LOS threshold.
- **Highlighted** values are a significant impact.
- (R) is City of Roseville jurisdiction.

Source: KD Anderson & Associates, Inc.

Table 14-18
Roadway Segment LOS – Cumulative Plus Project Conditions: With 12 ADUs

Roadway	Location	Standard			Cumulative No Project			Cumulative Plus Project Plus 12 ADUs				
								Daily Volume				
		LOS	Volume Threshold Per Lane (veh/ln)	Max 2-Way Volume at LOS Standard	Daily Volume	V/C	LOS	Project + ADUs Only	Total	V/C	LOS	Change in V/C
1. PFE Road	Walerga Rd to Cook Riolo Rd	D	6,870	13,740	7,900	0.53	A	37	7,937	0.53	A	0.00
2. PFE Road	Cook Riolo Rd to Antelope Rd	**F**	**6,870**	**13,740**	**18,300**	**1.22**	**F**	**12**	**18,312**	**1.22**	**F**	**0.00**
3. Cook Riolo Road	Baseline Rd to Vineyard Rd	F	6,870	13,740	9,600	0.64	B	15	9,615	0.64	B	0.00
4. Cook Riolo Road	Vineyard Rd to Creekview Ranch School	F	6,870	13,740	13,300	0.89	D	128	13,428	0.89	D	0.01
5. Cook Riolo Road	Creekview Ranch School to PFE Rd	F	6,870	13,740	12,100	0.81	D	69	12,154	0.81	D	0.00
6. Antelope Road	PFE Rd to Great Valley Dr	**E**	18,000[2]	36,000	**32,550**	**0.90**	**E**	**27**	**32,577**	**0.91**	**E**	**0.01**
7. Vineyard Road	Crowder Ln to Cook Riolo Rd	D	6,870	13,740	8,900	0.59	A	16	8,916	0.59	A	0.00
8. Vineyard Road	Cook Riolo Rd to Brady Ln	D	6,870	13,740	11,900	0.79	C	144	12,044	0.80	D	0.01
9. Vineyard Road	Brady Ln to Foothills Blvd (R)	D	7,500	15,000	18,250	1.22	F	673	18,923	1.26	F	0.04
10. Brady Lane	Baseline Rd to Project (R)	D	5,700	11,400	5,900	0.28	C	426	6,326	0.30	C	0.02
11. Brady Lane	Project to Vineyard Rd (R)	D	5,700	11,400	7,360	0.35	C	787	8,147	0.39	D	0.04

Notes:
- All study roadways are two lanes.
- **Bold** values exceed minimum LOS threshold.
- **Highlighted** values are a significant impact.
- (R) is City of Roseville jurisdiction.

Source: KD Anderson & Associates, Inc.

Conclusion

Based on the above, development of the proposed project would increase the volume of traffic along the study roadway segments. However, the project would not conflict with applicable County significance thresholds at the segment of PFE Road from Cook Riolo Road to Antelope Road or the segment of Antelope Road from PFE Road to Great Valley Drive. All other study roadway segments would continue to operate within accepted Placer County and Sacramento County minimum LOS thresholds. With required payment of applicable traffic impact fees to fund necessary roadway improvements included in the County's CIP, the proposed project's incremental contribution to cumulative impacts at the study roadway segments would be ***less than cumulatively considerable***. The potential inclusion of 12 on-site ADUs, in addition to the 119 single-family units, would not result in the generation of any significant cumulative roadway impacts.

Mitigation Measure(s)

None required.