3.14 Traffic and Circulation

3.14.1 SETTING

This section is based on the Traffic Impact Analysis for Rincon del Rio Continuing Care Retirement Community, Nevada County, California, prepared for the proposed project by KD Anderson & Associates, Inc. (2011), included as **Appendix 3.14-A** to this Draft EIR as well as a technical memorandum from KD Anderson & Associates dated January 13, 2012. The study area analyzed in the traffic analysis addresses traffic conditions on State Route 49 and County roads that would be used to access the site. The limits of the study area were identified through discussions with Nevada County Public Works staff.

STUDY AREA ROADWAY SYSTEM

State Route 49

State Route (SR) 49 is designated as a principal arterial route in the Circulation Element of the Nevada County General Plan. The roadway provides north–south access through the Sierra foothills. SR 49 also provides the primary access between Interstate 80 (I-80) in Auburn and Grass Valley and Nevada City to the north. SR 49 is a four-lane facility in the vicinity of the project site. At the Combie Road intersection, SR 49 is a four-lane facility with turn lanes. California Department of Transportation (Caltrans) traffic data from 2010 shows that SR 49 carries about 34,500 vehicles per day, referred to as average daily traffic (ADT), at the Placer County/Nevada county line (KD Anderson & Associates, 2012).

Rincon Way

Rincon Way is designated as a local road in the General Plan Circulation Element. Between SR 49 and the adjacent frontage road, approximately 65 feet east, Rincon Way is about 50 feet wide and accommodates left turning and right turning vehicles onto SR 49 as well as inbound vehicles from SR 49; currently, there is no lane striping to differentiate a left turn lane and a right turn lane. Between the frontage road and Hidden Ranch Road, Rincon Way is between 18 and 20 feet wide, while east of Hidden Ranch Road to the project's property entrance, the roadway narrows to about 16 feet in width.

It should be noted that Rincon Way has a 50-foot right-of-way between SR 49 and Hidden Ranch Road with a formal offer of public dedication and public utilities easement accepted for the 50-foot right-of-way; however, the offer of dedication to bring the road into the County's maintained mileage system and for County maintenance was not accepted.

Study Area Intersections

The quality of traffic flow is often governed by the operation of major intersections. For the project's Traffic Impact Analysis (KD Anderson 2011), one intersection was identified and confirmed with Nevada County and Caltrans staff for evaluation.

SR 49/Rincon Way Intersection

The SR 49/Rincon Way intersection is the public access intersection onto SR 49 for the proposed project. The intersection is a tee intersection with stop control along Rincon Way. SR 49 is a four-lane undivided highway with a 500-foot southbound left turn lane and a 300-foot northbound right turn lane. Rincon Way is currently striped as single lanes in each direction, although the inbound approach could be restriped to include left and right turn lanes. A storage/acceleration lane is present along the south side of the SR 49/Rincon Way intersection

to allow vehicles to queue while waiting for a gap in southbound traffic. The storage/acceleration lane is about 150 feet long.

Rincon Way/SR 49 Frontage Road Intersection

The Rincon Way/SR 49 Frontage Road intersection is an intersection located about 65 feet east of SR 49. The intersection is a tee intersection with the stem of the tee paralleling SR 49 to the south. All approaches to the intersection are single lane with stop control along the frontage road.

LEVEL OF SERVICE

Level of service (LOS) analysis has been employed to provide a basis for describing existing traffic conditions and for evaluating the significance of project traffic impacts. LOS measures the quality of traffic flow and is represented by letter designations from A to F, with a grade of A referring to the best conditions and F representing the worst conditions. **Table 3.14-1** presents typical LOS characteristics as presented in the Transportation Research Board's (TRB) *Highway Capacity Manual, 2000 edition* (2000 HCM).

TABLE 3.14-1
LEVEL OF SERVICE DEFINITIONS

LOS	Signalized Intersection	Unsignalized Intersection	Roadway (Daily)
A	Uncongested operations, all queues clear in a single-signal cycle. Delay < 10.0 seconds.	Little or no delay. Delay < 10 seconds/vehicle	Completely free flow.
B	Uncongested operations, all queues clear in a single cycle. Delay > 10.0 seconds and < 20.0 seconds.	Short traffic delays. Delay > 10 seconds/vehicle and < 15 seconds/vehicle	Free flow, presence of other vehicles noticeable.
C	Light congestion, occasional backups on critical approaches. Delay > 20.0 seconds and < 35.0 seconds.	Average traffic delays. Delay > 15 seconds/vehicle and < 25 seconds/vehicle	Ability to maneuver and select operating speed affected.
D	Significant congestion of critical approaches but intersection functional. Cars required to wait through more than one cycle during short peaks. No long queues formed. Delay > 35.0 seconds and < 55.0 seconds.	Long traffic delays. Delay > 25 seconds/vehicle and < 35 seconds/vehicle	Unstable flow, speeds and ability to maneuver restricted.
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 > 55.0 seconds and < 80.0 seconds.	Very long traffic delays, failure, extreme congestion. Delay > 35 seconds/vehicle and < 50 seconds/vehicle	At or near capacity, flow quite unstable.
F	Total breakdown, stop-and-go operation. Delay > 80.0 seconds.	Intersection blocked by external causes. Delay > 50 seconds/vehicle.	Forced flow, breakdown.

Source: TRB 2000

Intersection Levels of Service

Figure 3.14-1 presents the existing AM and PM peak hour traffic volumes at the study intersection, which was selected for analysis based on discussion with Nevada County and Caltrans staff. Traffic counts were conducted in June 2011 at the SR 49/Rincon Way intersection; schools were not in session at the time of the traffic counts. It is not expected that traffic conditions would be substantially higher if schools were in session. This is due to the location of the site, at the south edge of the county, and its relation to the schools in the vicinity. All of the schools are located north of the project, off of Combie Road and Wolf Road; the rural area south of Rincon Way to the Placer County line will add a minor amount of school-based traffic onto SR 49.

The PM counts were also compared to counts conducted in December 2008 at the same intersection while school was in session. The current 2011 counts show that the northbound movements are lower by about 7 percent while the southbound counts are higher by about 22 percent.

Table 3.14-2 summarizes current average LOS at the study area intersection during the AM and PM peak hours.

TABLE 3.14-2
EXISTING ROADWAY SEGMENT LEVELS OF SERVICE

Location	Control	AM Peak Hour		PM Peak Hour		Meets Traffic Signal Warrants?	
		LOS	Average Delay (seconds)	LOS	Average Delay (seconds)	Del	Vol
SR 49/Rincon Way	WB Stop					No (No)	No (No)
Avg. delay		A	0.1	A	0.2		

Notes: del - peak hour delay warrant; vol – peak hour volume warrant; xx – a.m. (yy) – p.m.
Source: KD Anderson 2011, p. 9

As noted in the Study Area Intersections subsection above, the westbound approach is wide enough to have right and left turn lanes striped along Rincon Way at SR 49. The LOS analysis assumed this lane configuration although it is currently striped as a single lane. The LOS in both AM and PM peak hours is adequate at the intersection. The westbound leg operates at LOS B in the AM peak hour and LOS C in the PM peak hour. The intersection does not meet the peak hour signal warrant.

TRAFFIC SAFETY

Collision History

In 2004, SR 49 was widened between the Bear River Bridge and Combie Road–Wolf Road; the project site and Rincon Way are about a half mile north of the Bear River Bridge. The roadway project widened SR 49 to five lanes within the corridor. Additionally, a left turn lane, a short

acceleration lane for southbound traffic and a northbound right turn lane were added at the Rincon Way intersection to improve safety along the corridor.

A review of the past three years of collision data was conducted to determine whether any collision types are prevalent at the SR 49/Rincon Way intersection. Data was provided from the California Highway Patrol for the period from January 2007 through available 2010 and 2011 data. The data was provided between post miles 0.275 and 0.653 in Nevada County, an area approximately 1,000 feet south of Rincon Way to approximately 1,000 feet north of Rincon Way.

Only one reported collision was identified during review of the data. The collision occurred in November 2009 around 6:00 AM and involved a southbound vehicle and an animal just north of the Rincon Way intersection. No roadway or vehicle factors were associated with the collision.

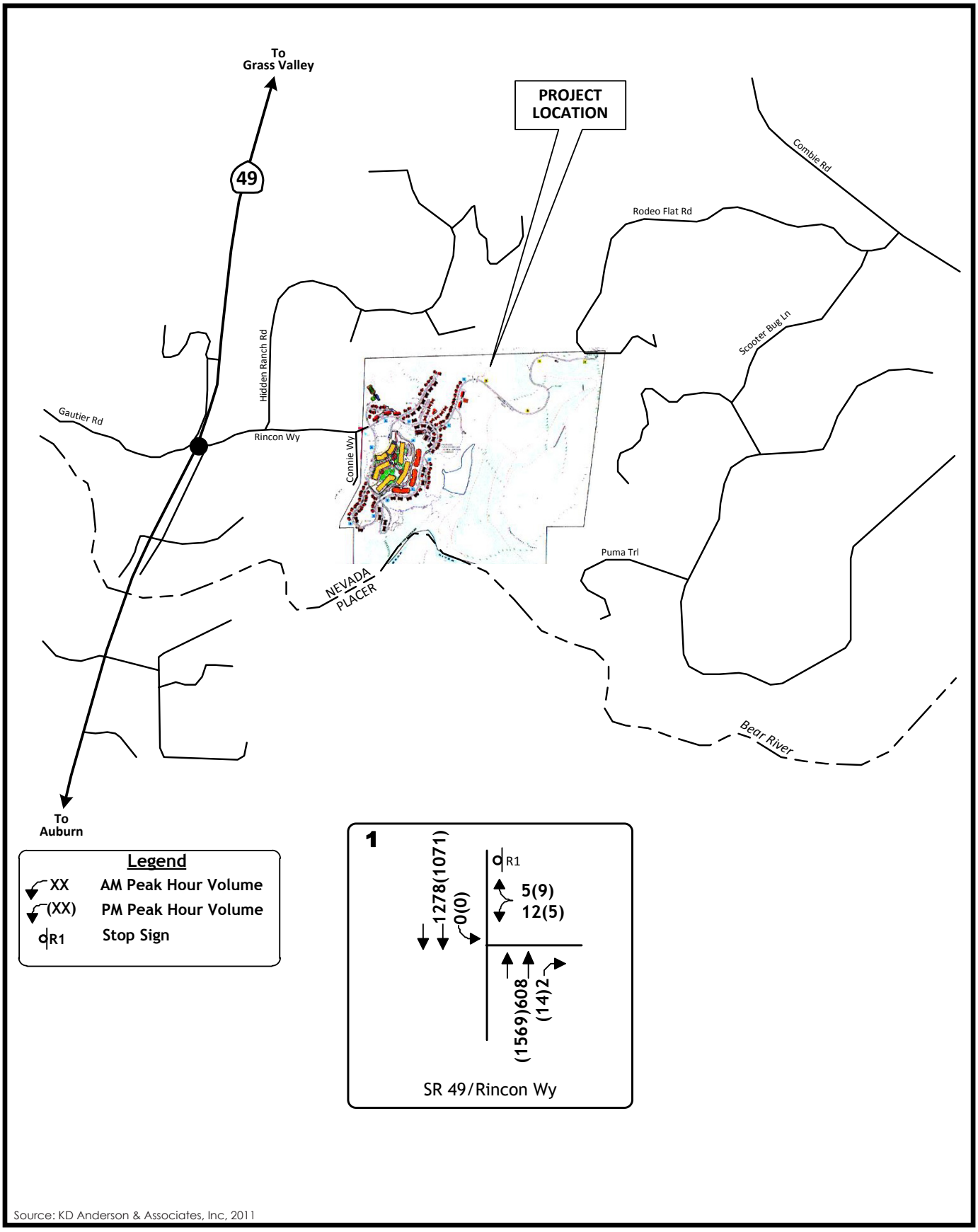
EMERGENCY VEHICLE ACCESS

The project site would have a single public access connecting to SR 49 via Rincon Way. A second emergency vehicle access, which would be gated (not locked), has been identified along Rodeo Flat Road. Rodeo Flat Road provides access to single-family houses beginning at Combie Road and extends to its terminus at the northeast corner of the project site. The project proposes to extend the road onto the project site, providing the gated access for emergency vehicle traffic.

The proposed project includes a Petition for Exceptions for both Rincon Way and Rodeo Flat Road. The exception for the Rincon Way easement is necessary as the existing 30-foot-wide road width does not meet the County's 50-foot easement standard and the existing 30-foot-wide road easement does not allow for the required 10-foot-wide brush clearing zones adjacent to the roadway.

The exception for Rodeo Flat Road is necessary as County road standards currently require that fire standard access roads not exceed a 16 percent grade. On May 23, 2011, SCO Planning, Engineering, and Surveying submitted a memorandum to the County summarizing the results of a topographic field survey conducted on Rodeo Flat Road in May 2011. The memorandum, which is included in **Appendix 3.14-A**, indicates that the grade on Rodeo Flat Road is below 16 percent in all but one location just north of its terminus, where approximately 97.7 feet of roadway is at a 16.3 percent grade. As such, the proposed project includes a Petition for Exception to the 16 percent grade requirement.

The proposed emergency vehicle access would provide emergency access from two directions. First, emergency vehicle access could occur via Rincon Way from SR 49 or via Rodeo Flat Road from Combie Road, depending on the responder's location. Second, emergency vehicle access could provide a secondary access to SR 49 should evacuation of the Lake of the Pines community be required during a catastrophic event. Traffic would proceed from Combie Road, along Rodeo Flat Road, and through the project site to access SR 49.



Source: KD Anderson & Associates, Inc, 2011

N

Figure 3.14-1
Existing Traffic Volumes and Lane Configurations

PMC

ALTERNATIVE TRANSPORTATION MODES

Transit System

Nevada County's public transit system includes a fixed-route bus service provided by the Gold Country Stage transit service. One route, Gold Country Stage Route 5, provides service to the Lake of the Pines area. This route includes service to Nevada City, Grass Valley, and the Auburn multimodal center at the Amtrak train station. This service runs at approximately two-hour headways. There are no flag-down stops along SR 49 due to safety issues.

Dial-a-ride is available in the county and provides service to elderly, handicapped, and disabled riders on a demand service. Gold County Telecare transports elderly, handicapped, and disabled riders.

Bicycle and Pedestrian System

Bicycling and walking generally have not been widely used as transportation modes in Nevada County with the exception of students commuting to school and recreational trips (Nevada County 1995). Walking and bicycling activity on dedicated facilities is not present in the project site, and no existing bikeway or pedestrian facilities were identified within the immediate area of the proposed project.

Rail

While fixed rail service is not provided in Nevada County, Amtrak operates Thruway bus service connecting Nevada City, Grass Valley, and Lake of the Pines with the Capitol Corridor rail service between Auburn and San Jose and the San Joaquin rail service that provides service between Emeryville and Bakersfield.

3.14.2 REGULATORY FRAMEWORK

REGIONAL

Western Nevada County Regional Transportation Mitigation Fee Program

The purpose of the Regional Transportation Mitigation Fee (RTMF) Program, adopted in 2008, is to finance improvements to the regional network of streets and roads that are needed to mitigate the impact of increased traffic which will result from new development. The fee program was adopted by the City of Grass Valley, the City of Nevada City, and Nevada County and is administered by the Nevada County Transportation Commission (NCTC) through agreements with each agency (NCTC 2010).

The project site is within the RTMF Program boundary and, as such, will be required to pay fees used to improve regional circulation system improvements via the RTMF.

LOCAL

Nevada County General Plan

The Nevada County General Plan serves as the overall guiding policy document for the unincorporated areas of Nevada County. A summary of the project's consistency with applicable General Plan transportation and circulation policies is contained in **Appendix 3.0-A**. While this Draft EIR analyzes the project's consistency with the General Plan pursuant to California Environmental Quality Act (CEQA) Section 15125(d), the Nevada County Board of Supervisors makes the ultimate determination of consistency with the General Plan.

Nevada County Land Use and Development Code

Chapter XVII – Road Standards

The Nevada County Road Standards (Chapter XVII of the Land Use and Development Code) set the guidelines for the design, plan preparation, and construction of roads, drainage, and related improvements in the county.

Chapter XVI – Fire Safety Regulations

Nevada County Land Use and Development Code, Chapter XVI, includes requirements intended to mitigate effects of wildland fire exposure to land uses within the State Responsibility Areas. The fire safety regulations provide measures for emergency access, street name and building address signage, water reserves for emergency fire use, and vegetation modification.

Section L-II 4.1.9 – Transportation Alternatives

The Nevada County Land Use and Development Code, Section L-II 4.1.9, requires all projects to consider methods for reducing dependence on the automobile by exploring alternative modes of transportation. This section of the code requires that all land use applications requiring a development permit or a use permit address alternative transportation opportunities for employees, residents, and/or customers served by the project by providing an identification of the transportation needs generated by the proposed project, an identification of existing and potential alternatives to individual automobile use, and the applicant's proposal to incorporate one or more measures into the project to ensure use of viable alternatives.

Section L-II 4.2.9 – Parking

The Nevada County Land Use and Development Code, Section L-II 4.2.9, includes parking standards that are intended to minimize street congestion and traffic hazards, to provide safe, convenient access to business, public services, and places of public assembly, to minimize impervious surfacing, and to visually improve parking area appearances in the county. This section of the code requires that minimum off-street parking, including adequate provisions for safe ingress and egress, be provided at the time of construction of any structure or at the time any such structure is enlarged, increased in capacity by adding floor area or seats, or at such time that a higher usage is applied. The code also includes parking lot design standards, parking space standards, wheelchair accessible parking requirements, parking lot construction standards, and required number of spaces by use.

3.14.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the California Environmental Quality Act (CEQA) Guidelines Appendix G thresholds of significance, which state that a project would have a significant transportation impact if it would:

1) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

2) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.

3) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

4) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

5) Result in inadequate emergency access.

6) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

For the purposes of this Draft EIR, the following criterion was also used in determining whether the proposed project would result in a significant impact associated with land use. An impact would be considered significant if the project would:

7) Result in inadequate parking capacity.

The proposed project is not located in the immediate vicinity of an airport, does not propose any tall structures, and would not generate increased air traffic volumes. Therefore, the project would have no impact on air traffic patterns. Impacts associated with Standard of Significance 3 will not be discussed further in this section.

METHODOLOGY

This section is based on the Traffic Impact Analysis for Rincon del Rio Continuing Care Retirement Community, Nevada County, California, prepared for the proposed project by KD Anderson & Associates, Inc. (2011), included as **Appendix 3.14-A** to this Draft EIR. The limits of the study area were identified through discussions with Nevada County Public Works staff.

Trip Generation, Distribution, and Assignment

The development of the proposed project would attract additional traffic to the project site. The amount of additional traffic on a particular section of the street network is dependent upon two factors:

- Trip Generation – the number of new trips generated by the project
- Trip Distribution and Assignment – the specific routes that the new traffic takes

Trip Generation

Trip generation is determined by identifying the type and size of land use being developed. Recognized sources of trip generation data may then be used to calculate the total number of trip ends. The trip generation of the proposed project was computed using trip generation rates published in *Trip Generation* (ITE 2008) based on the projected use of the site. The project includes development of a continuing care retirement community (CCRC), which is a land use that provides multiple elements of senior adult living. Residents can move from independent living to increased care facilities as lifestyles change with time. CCRC communities may also contain special services such as medical, dining, recreational, and limited retail supporting facilities, which would reduce the need to travel outside of the site. Continuing care retirement communities are typically designed as self-contained villages; therefore, related land uses such as senior adult housing, detached and attached, assisted living, and nursing homes do not represent the overall composition of the project.

The variable considered to establish trip generation for the proposed project was trip ends per occupied unit. To provide a conservative approach, the number of occupied units was equal to the total units proposed for the project. The project will provide housing for a maximum of 415 residents in 345 attached and detached housing units. Proposed development associated with the project would be limited to 48 acres total, with all development except the proposed emergency access road, trails, barbeque areas, water tank, and sewer lift station to be clustered within the northwest portion of the site. **Table 3.14-3** presents daily AM and PM peak hour trip generation estimates for the project. The project is expected to generate 969 daily trips with 62 AM peak hour trips and 100 PM peak hour trips generated.

TABLE 3.14-3
PROJECT TRIP GENERATION

Land Use	Size	Trip Rates				
		Daily	AM Peak		PM Peak	
Continuing Care Retirement Community	345 Units	2.81	0.18		0.29	
			In	Out	In	Out
			64%	36%	48%	52%
		Trips Generated				
Total New Trips		969	40	22	48	52

Source: KD Anderson 2011, p. 10

Trip Distribution and Assignment

Public access to the site would be along Rincon Way from SR 49. Trip distribution under existing conditions was based on review of existing traffic counts along SR 49 and existing traffic to and from Rincon Way, on locations of trip origins for inbound traffic and on possible destinations of outbound traffic. Typical origin trips would be expected to include, but not be limited to, employees of the site, including the acute care facilities and facilities maintenance, and mail and delivery services throughout the day. Typical destination trips would include medical appointments and shopping. Under existing conditions, the trip distribution would be expected to be similar to the current turning movements based on the inbound origin trips and destinations for residents. Typical origin trips are expected to include, but not be limited to, residents, employees of the site, including the acute care facilities and facilities maintenance, and mail and delivery services throughout the day. The CCRC residents would have a wide range of ambulatory skills. It is not unreasonable that the trip distribution could be similar in the near term to the existing trip distribution. Typical destination trips would include medical appointments and shopping. It is projected that more traffic will arrive and depart to the south in the a.m. peak hour, while in the p.m. peak hour traffic will be about evenly split between the north and south. The a.m. peak hour is expected to have more employee-related trips. while the p.m. peak hour would have both employee- and resident-related trips. Resident-related trips would include shopping, medical appointments, and recreational activities such as golfing. It is projected that 74 percent of the trips in the a.m. would be to the south, while in the p.m. peak hour 51 percent of the trips would be to and from the north.

Table 3.14-4 shows the projected trip distribution for the project under current conditions during the peak periods.

TABLE 3.14-4
PROJECT TRIP DISTRIBUTION

Route	Percentage of Total	
	AM	PM
North on SR 49	26%	51%
South on SR 49	74%	49%
Total	**100%**	**100%**

Source: KD Anderson 2011, p. 11

Traffic generated by the project is shown in **Figure 3.14-2**. This traffic was then added to existing peak hour volumes based on the distribution percentages. **Figure 3.14-3** displays the existing plus project generated traffic anticipated for the study intersection (SR 49/Rincon Way intersection) in both AM and PM peak hours.

The impacts of developing the project have been identified by superimposing project traffic onto existing background conditions. Resulting intersection LOS was then calculated and used as the basis for evaluating potential project impacts.

Level of Service Methodology

Procedures used for calculating level of service (LOS) at signalized intersections are as presented in the TRB's 2000 HCM. In addition to traffic volume, these procedures make use of geometric information and traffic signal timing data. Local agencies and Caltrans adopt minimum LOS standards for their facilities. Nevada County identifies LOS C as the acceptable level of service in Rural Regions. LOS D is the acceptable standard on Caltrans facilities in this area. The methodology employed to determine LOS for this analysis makes use of the procedures contained in the 2000 HCM. The software used for LOS analysis was Synchro.

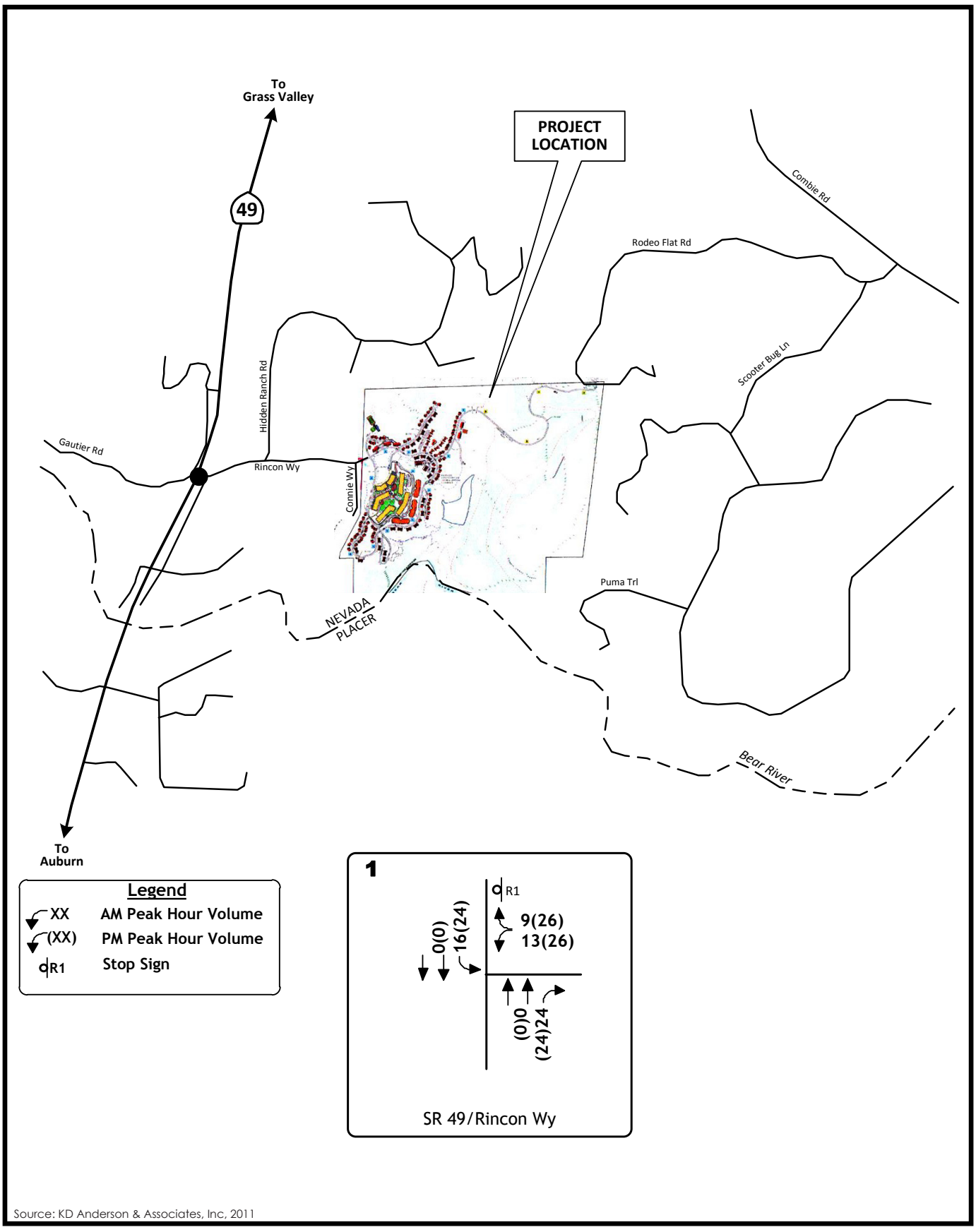
Unsignalized intersections were analyzed using the method documented in the 2000 HCM. This method calculates the weighted average delay for each controlled movement and for the intersection as a whole. The analysis considers gap acceptance and average delay of motorists on minor streets and in turn lanes to establish service levels. Intersection levels of service presented in this analysis are based on the weighted average total delay per vehicle for the intersection as a whole.

At unsignalized intersections, a traffic impact is considered adverse but not significant if the agency LOS standard is exceeded but the projected traffic does not satisfy traffic signal warrants. Under these conditions, the only means to completely alleviate delays to stop-controlled vehicles would be to install a traffic signal. However, the unmet signal warrants would imply that the reduction in delay for the stop-controlled vehicles may not justify the new delays that would be incurred by the major street traffic (which is currently not stopped). Under these circumstances, installation of a signal would not be recommended and the substandard LOS for stop-controlled vehicles would be considered an adverse but not significant impact.

Traffic Signal Warrants Procedures

Traffic signal warrants are a series of standards that provide guidelines for determining if a traffic signal is appropriate. Signal warrant analyses are typically conducted at intersections of uncontrolled major streets and stop sign-controlled minor streets. If one or more signal warrants are met, signalization of the intersection may be appropriate. However, a signal should not be installed if none of the warrants are met, since the installation of signals would increase delays on the previously uncontrolled major street, resulting in an undesirable increase in overall vehicle delay at the intersection. Signalization may also increase the occurrence of particular types of accidents. Therefore, if signals are installed where signal warrants are not met, the detriment of increased accidents and overall delay may be greater than the benefit in traffic operating conditions on the single worst movement at the intersection. Signal warrants, then, provide an industry-standard basis for identifying when the adverse effect on the worst movement is substantial enough to warrant signalization.

For the traffic analysis conducted for the TIS, available data was limited to a.m. and p.m. peak hour volumes. Thus, unsignalized intersections operating at poor LOS were evaluated using the Peak Hour Warrant (Warrant Number 3) from the document *Manual on Uniform Traffic Control Devices for Streets and Highways FHWA's MUTCD 2003 Edition, as amended for use in California* (CAMUTCD) (Caltrans 2006). Even if the Peak Hour Warrant is met, a more detailed signal warrant study is necessary before a signal is installed. The more detailed study should consider volumes during the eight highest hours of the day, volumes during the four highest hours of the day, pedestrian traffic, and accident histories.



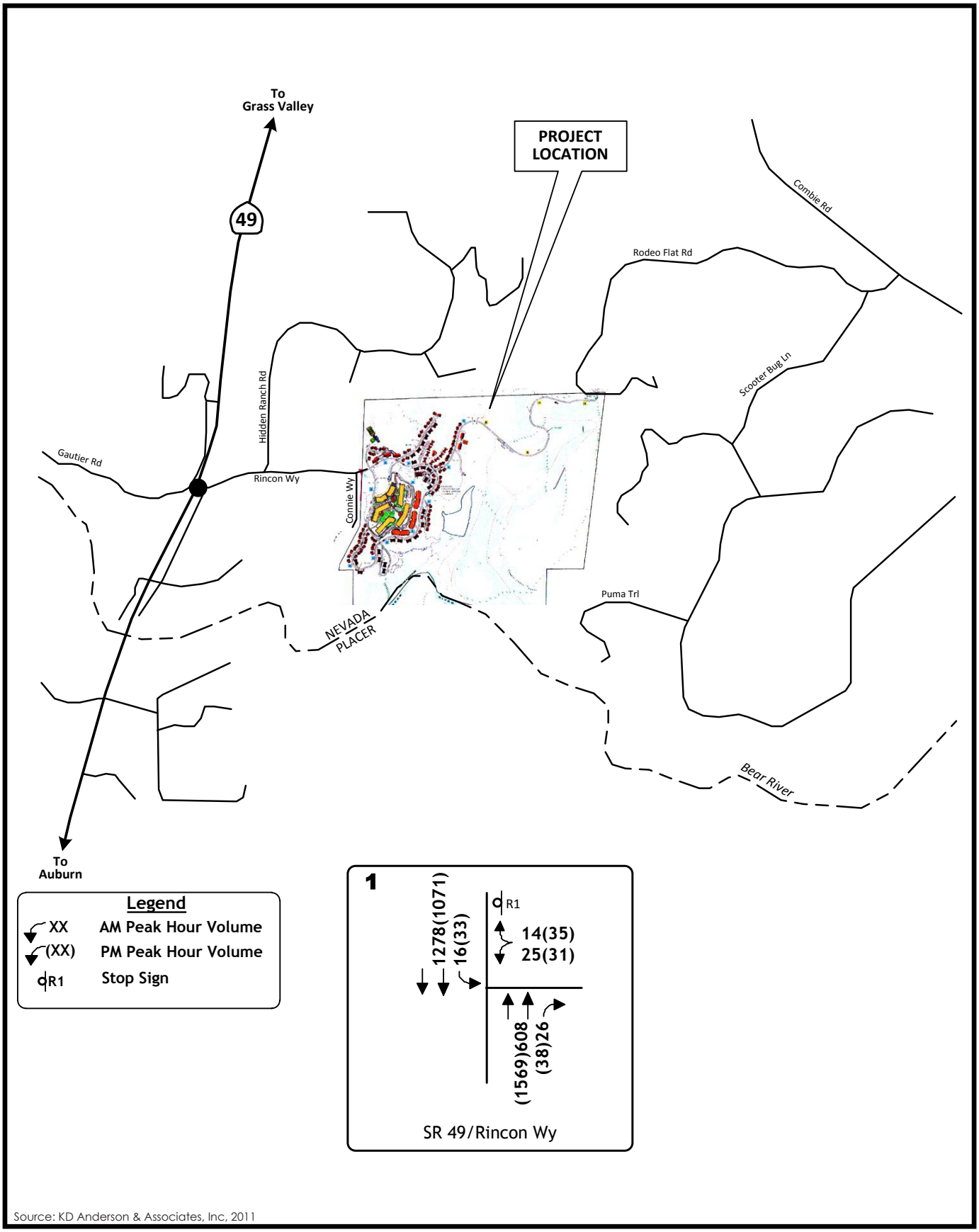
Source: KD Anderson & Associates, Inc, 2011

N

Figure 3.14-2

Project Only Traffic Volumes and Lane Configurations

PMC



Source: KD Anderson & Associates, Inc, 2011

N

Figure 3.14-3
Existing Plus Project Traffic Volumes and Lane Configurations

IMPACTS AND MITIGATION MEASURES

Substantial Increase in Traffic (Standards of Significance 1 and 2)

Impact 3.14.1 Development of the proposed project could cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system surrounding the project site (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). This impact is considered **less than significant.**

The proposed project will increase traffic on Rincon Way by an estimated 969 trips per day. The current estimated volume of traffic on Rincon Way is 370 trips per day. The total traffic on Rincon Way after implementation of the project would be approximately 1,339 ADT (969 ADT + 370 ADT = 1,339 ADT). The increase in traffic of 599 trips per day represents a 162 percent increase over existing conditions, which is considered substantial. However, the county's General Plan indicates that a Local Road (e.g. Rincon Way) provides access for areas with traffic volumes between 101 ADT and 2000 ADT. Therefore, implementation of the project would not exceed the capacity of Rincon Way. Therefore, while the change in traffic will be noticeable to the neighborhood residents, and in terms of numbers of cars per day the change from the very low existing volumes is substantial, the total traffic is within the design expectations of the roadways and consistent with similarly designed roadways in the county. This impact is therefore considered **less than significant**.

As identified in **Table 3.14-3**, the proposed project would result in 969 daily trips along SR 49. This traffic volume is less than 5 percent of the current traffic volume along SR 49 in the project area and would not impact the capacity of the highway. As shown in **Table 3.14-5**, SR 49 would maintain acceptable level of service operations. Thus, impacts to SR 49 are less than significant.

TABLE 3.14-5
EXISTING SR 49 SEGMENT LEVELS OF SERVICE

Roadway	Location	Facility Classification	Standard		Existing Condition		Existing + Project Condition	
			LOS	Daily Volume Threshold	Daily Volume	LOS	Daily Volume	LOS
State Route 49	North of Rincon Way	Principal Arterial	D	51,300	34,500*	B	34,838	B
	South of Rincon Way	Principal Arterial	D	51,300	34,500*	B	35,082	B

Source: KD Anderson, 2012

Mitigation Measures

None required.

Intersection LOS (Standards of Significance 1 and 2)

Impact 3.14.2 Following implementation of the proposed project, the SR 49/Rincon Way intersection would meet level of service standards and would not meet the peak hour signal warrant. Therefore, this impact would be **less than significant**.

As stated in the Methodology subsection above, the proposed project would generate approximately 969 additional trips on project area roadways. **Table 3.14-6** compares the average AM and PM peak hour LOS at the study intersection (SR 49/Rincon Way intersection) with and without the project. As shown, the average delay, which is the focus of the County standard, would both operate at LOS A in both the AM and PM peak hours after implementation of the project.

TABLE 3.14-6
PEAK HOUR INTERSECTION LEVELS OF SERVICE
EXISTING PLUS PROJECT CONDITIONS

Location	Control	Existing				Existing Plus Project				Meets Traffic Signal Warrants?	
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		Del	Vol
		LOS	Average Delay	LOS	Average Delay	LOS	Average Delay	LOS	Average Delay		
SR 49/ Rincon Way	WB Stop									No (No)	No (No)
Avg. delay		A	0.1	A	0.2	A	0.3	A	0.9		

Notes: del - peak hour delay warrant; vol – peak hour volume warrant; xx – a.m. (yy) – p.m.
Source: KD Anderson 2011, p. 14

The SR 49/Rincon Way intersection average delay, which is the focus of the County LOS standard, would both operate at LOS A in both the AM and PM peak hours after implementation of the project, which is within the accepted Caltrans threshold as well as the County rural LOS threshold. As such, LOS impacts to this intersection would not be substantial.

The intersection would operate at the southbound approach at LOS A in both the AM and PM peak hours and the westbound approach at LOS B in the AM peak hour and LOS D in the PM peak hour after implementation of the project. While the westbound approach would operate at LOS D in the PM peak hour after implementation of the project, which is not within the County rural LOS threshold, the Nevada County LOS standard focuses on the average delay experienced by the intersection as a whole. In addition, the additional traffic generated by the project would not meet the peak hour signal warrant. As previously noted, a traffic impact can be considered adverse but not significant if the agency LOS is exceeded but the projected traffic does not satisfy traffic signal warrants. Under existing plus project conditions, the westbound approach would operate under adverse conditions as the LOS is exceeded along the minor leg, i.e., Rincon Way, but the intersection would not meet the peak hour signal warrant. This adverse condition is not considered a significant impact as the installation of an unwarranted signal is not a recommended mitigation. Furthermore, it is important to note that the westbound approach is the most minor turning movement of the SR 49/Rincon Way intersection in terms of number of automobiles and relatively few cars would make this particular movement in comparison to north and southbound traffic on SR 49. Not only will the intersection operate at LOS A overall, and the overall LOS of an intersection is the focus of the County LOS standard, north and southbound traffic on SR 49 would not experience an increase of delays.

Sight distance looking both northbound and southbound on SR 49 is approximately 1,500 feet. As such, installation of a traffic signal is not a recommended mitigation, and this impact is considered to be **less than significant**.

It should be noted that the project site is within the RTMF Program boundary and is required to pay fees representing the project's fair share of the cost of regional circulation system improvements.

Mitigation Measures

None required.

Queuing Impacts (Standards of Significance 1 and 2)

Impact 3.14.3 As currently configured, the SR 49/Rincon Way intersection is not expected to have queuing issues. Therefore, this impact is considered to be **less than significant**.

A queuing analysis is important as it identifies whether adequate storage would available for vehicles exiting or entering SR 49 after project implementation. A queuing analysis using Synchro software was conducted along the southbound left turn lane and westbound approach of the SR 49/Rincon Way intersection. The existing southbound left turn lane is about 500 feet while Rincon Way is currently striped as a single lane. Queues were also considered at the Rincon Way/SR 49 Frontage Road intersection, about 65 feet east of the main intersection. For analysis purposes, the existing acceleration lane for westbound to southbound traffic was assumed to store two vehicles at any given time. This allows vehicles leaving Rincon Way to complete the movement into the southbound through traffic lanes in two movements, the first across northbound traffic, and the second the merge into the southbound traffic flow.

A 95 percent confidence level was used, meaning that the forecast queue length should be exceeded only 5 percent of the time. **Table 3.14-7** compares the existing queues to the projected queues after implementation of the proposed project.

TABLE 3.14-7
PROJECTED QUEUES

Location	Existing		Existing + Project	
	AM	PM	AM	PM
SR 49/Rincon Way				
SB Left	<25′	<25′	<25′	<25′
WB	<25′	<25′	<25′	26′
Rincon Way/SR 49 Frontage				
NB	<25′	<25′	<25′	<25′
WB Left	<25′	<25′	<25′	<25′

Source: KD Anderson 2011, p. 22

Under both existing and existing plus project conditions, the projected queue for each of the movements is less than 25 feet, except the westbound approach of Rincon Way at SR 49, which has a projected queue of 26 feet. These queue lengths would not result in traffic blocking the

intersection while queuing to enter SR 49. Therefore, this impact would be considered **less than significant.**

Mitigation Measures

None required.

Traffic Hazards – Sight Distance and Collisions (Standard of Significance 4)

Impact 3.14.4 Implementation of the proposed project could result in increased hazards associated with sight distance along Rincon Way. This is a **potentially significant** impact.

Only one reported collision was identified in the project area since 2007; no roadway or vehicle factors were associated with that collision. Given the existing condition of SR 49/Rincon Way intersection (left turn lane, short acceleration lane for southbound traffic, and northbound right turn lane) along with the general absence of collisions/accidents in recent years, the intersection is not considered dangerous and project traffic would not be expected to substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections).

Rincon Way, which would provide access to the project site, will be improved to meet the County's standards. Improvements would be within a 30-foot-wide public roadway and utility easement, developed in accordance with County road standards. The 30-foot-wide easement would include two 10-foot vehicle travel lanes. It should be noted that the proposed project includes a Petition for Exception for the Rincon Way easement as the existing 30-foot-wide road width does not meet the County's 50-foot easement standard.

As noted in the site analysis provided by KD Anderson, Rincon Way was not striped at the time of the field review. As a result, while the roadways and intersection are wide enough to support project traffic, the lack of striping could confuse drivers and reduce the capacity of the intersection. This is a **potentially significant** impact that is addressed through mitigation measure **MM 3.14.4a** below.

While the intersection of Rincon Way and Connie Court currently meets sight distance standards, the project has the potential to modify this intersection. This is a **potentially significant** impact. Mitigation measure **MM 3.14.4b** is intended to ensure that the sight line standards are reviewed as part of the improvement plan approval process as part of improvements to Rincon Way.

Mitigation Measures

MM 3.14.4a The project applicant shall be responsible for the entire cost of restriping Rincon Way at SR 49. Westbound Rincon Way shall be striped to include dedicated left and right turn lanes in order to provide positive guidance for motorists queuing along Rincon Way while waiting to enter the northbound or southbound SR 49 traffic flow.

Timing/Implementation: *Prior to issuance of grading permits*

Enforcement/Monitoring: *Nevada County Department of Public Works*

MM 3.14.4b If the project will modify the Rincon Way/Connie Court intersection with the completion of the project entrance, changes in roadway segments shall be designed to meet sight distance standards identified in the Caltrans Highway Design Manual. A minimum 150-foot sight line shall be provided meeting stopping sight distance standards identified in the Caltrans Highway Design Manual.

Timing/*Implementation:* *Prior to issuance of occupancy permit*

Enforcement/Monitoring: *Nevada County Department of Public Works*

Mitigation measures **MM 3.14.4a** and **MM 3.14.4b** would reduce impacts to a **less than significant** level.

It should also be noted that visibility from the intersection of Hidden Ranch Road and Rincon Way, located approximately 950 feet east of SR 49 and approximately 1,200 feet west of the project site, is currently hindered due to existing vegetation along the northeast side of the intersection extending about 150 feet east of the intersection. This is an existing condition not caused by the project. Furthermore, the management of roadside vegetation within the right-of-way is the responsibility of the vicinity property owners as Hidden Ranch Road and Rincon Way are private roads. As such, vegetation along Rincon Way and Hidden Ranch Road will be maintained consistent with the County's Roadside Vegetation Management Plan (Nevada County 2003) by the vicinity property owners. The plan requires vegetation control that results in road shoulders that are safer for motorists, promotes longer pavement life, and provides a minor firebreak along county roadsides consistent with good fire-safe practices.

Adequate Emergency Access (Standard of Significance 5)

Impact 3.14.5 The proposed project would provide adequate emergency access; however emergency access via Rodeo Flat Road would not be locked. This impact would be **potentially significant**.

Consistent with the County's General Plan and Emergency Operations Plan, primary emergency access to the project site would be provided via State Route 49 accessed by Rincon Way. The proposed project includes a Petition for Exceptions for the Rincon Way easement as the existing 30-foot-wide road width does not meet the County's 50-foot easement standard; the proposed exception would not affect the ability of emergency vehicles to access the project site in the event of an emergency.

In addition, the proposed project includes a secondary emergency-only access via a connection to Rodeo Flat Road, located at the northeast corner of the project site. The project proposes to extend a fire standard access road to Rodeo Flat Road, connecting Rodeo Flat Road with Rincon Way. The project will install a gate limiting access to this road to emergency vehicle traffic. After implementation of the project, emergency vehicle access could occur via Rincon Way from SR 49 or via Rodeo Flat Road from Combie Road, depending on the responder's location. In addition, this emergency vehicle access could provide a secondary access to SR 49 should evacuation of the Lake of the Pines community be required.

As shown in **Figure 3.8-2** in Section 3.8, Hazardous Materials/Human Health, there is currently only one evacuation route out of the Ranchos/Combie Road corridor area, and all emergency evacuation and response for the area is currently funneled to Combie Road. Therefore, implementation of the proposed project would provide an additional emergency-only roadway

connection that would offer a greater number of emergency access options for the mobility of fire suppression, emergency response, and law enforcement vehicles during an emergency. As such, implementation of the proposed project would improve emergency access to the entire Ranchos/Combie Road corridor area.

Nevada County Land Use and Development Code Chapter XVI (Fire Safety Regulations) and Chapter XVII (Road Standards) include standards for roads and private driveways to facilitate emergency access for evacuation and service response to structural and wildland fires. The on-site fire standard access road would be constructed consistent with County standards. However, the proposed project includes a Petition for Exception to the 16 percent grade requirement because approximately 97.7 feet of Rodeo Flat Road has been surveyed at a 16.3 percent grade. Given that the roadway standard would be exceeded by less than half of a percentage point and that the portion of roadway exceeding the standard is relatively short in length (less than 100 feet), the use of Rodeo Flat Road as a secondary emergency access would be considered adequate to serve the proposed project. Furthermore, CAL FIRE has indicated that the Fire Captain/Deputy Fire Marshall has reviewed and does not oppose the proposed emergency vehicle access/requested exception because the roadway grade is an existing condition, the length of roadway exceeding the standard is limited, and the project design includes a number of fire safe features, including site design, the use of sprinklers and alarms, on-site water storage, and hydrants (Adamson 2011).

Furthermore, it should be noted that the connection between Rodeo Flat Road and the proposed project site would be gated but not locked. The following mitigation measure would assist in reducing the potential for Rodeo Flat Road to be used as a throughway for the general public. Given that the project entrance would consist of an entry gate feature, it is not expected that the project site would be used as a new through roadway connection to Rodeo Flat Road for area traffic.

Mitigation Measure

MM 3.14.5 The project applicant shall include visually prominent signage on or beside the proposed emergency access gate separating the site and Rodeo Flat Road. The signage shall indicate that the access is intended for emergency vehicle access only, or other wording limiting the access roadway to emergency vehicle traffic. The gate shall be designed to close automatically via spring, gravity, or other means to ensure that it presents a "closed" visual to drivers on Rodeo Flat Road. The roadway in front of the gate shall have a Fire Marshall approved turnaround that does not involve entering the gate.

Timing/Implementation: *Prior to issuance of occupancy permit*

Enforcement/Monitoring: *Nevada County Department of Public Works*

Although the connection between Rodeo Flat Road and the proposed project site would be gated, mitigation measure **MM 3.14.5** would clearly identify the gated connection as emergency access and would ensure that the gate would remain closed except during emergencies. Furthermore, as the proposed project would provide two options for emergency access and would generally improve emergency access in the entire Ranchos/Combie Road corridor area, impacts associated with emergency access would be **less than significant**.

Mitigation Measures

None required.

Adequate Parking (Standard of Significance 7)

Impact 3.14.6 The proposed project would provide adequate parking. This impact would be **less than significant**.

The proposed project discourages cars on the project site and encourages alternative transportation and pedestrian orientation to minimize the need for parking. For example, porches rather than garages would front the street in order to encourage pedestrian use and discourage driving. Bike racks would be installed throughout the project site, and carpooling and organized ridesharing would be facilitated by staff to reduce vehicle use. These project components/policies would reduce the need for vehicle use, and thus for parking, on the project site.

In addition, the project includes a total of 540 parking spaces for both residential uses and community support uses. Although the Nevada County Land Use and Development Code, Section L-II 4.2.9, Parking, specifies the required number of spaces by use, the proposed project proposes zoning text amendments to establish a CCRC definition and associated development standards, including parking standards. The parking requirements that would apply to the proposed project are as noted below:

a. Independent Living Units: 1 stall per unit

b. Special Care Units: 1 stall per four beds

c. Administration: 1 stall per 300 square feet of gross floor area

d. Employees: 1 stall per each non-Administration employee on shift

e. Guest Parking: 1 stall per each 3 units

f. Truck Loading Zone: 1 space in proximity to the main dining or administrative building

Table 3.14-8 calculates the required parking per the proposed CCRC parking standards and the parking included in the project to determine if proposed parking would be adequate and would meet requirements.

TABLE 3.14-8
PROJECT PARKING

	Number of Units	Number of Beds	Nonresidential Square Footage	Required Parking	Proposed Parking	Parking Requirements Met?
Residential Independent Living						
Cottages	78	–	–	78 resident and 26 guest spaces	78 resident spaces and 26 guest spaces	Yes
Duplex	46	–	–	46 resident spaces and 16 guest spaces	46 resident spaces and 16 guest spaces	Yes
4-Plexes	40	–	–	40 resident spaces and 14 guest spaces	40 resident spaces and 14 guest spaces	Yes
Cohousing Duplex	12	–	–	12 resident spaces and 4 guest spaces	12 resident spaces and 4 guest spaces	Yes
Cohousing 4-Plex	8	–	–	8 resident spaces and 3 guest spaces	8 resident spaces and 3 guest spaces	Yes
Group House (2 Story)	4 (6 suites per unit)	–	–	6 resident spaces and 2 guest spaces	6 resident spaces and 2 guest spaces	Yes
Lodge	28	–	–	28 resident and 10 guest spaces	70 (garage)	Yes +32 extra spaces
Subtotals	**216 units**	–	–	**293**	**325**	Yes
Residential Nursing Care						
Hospice	–	16 beds	–	4	4	Yes
Group House Memory Care	–	24 beds	–	6	6	Yes
Lodge Nursing Care	21	–	–	21 resident and 7 guest spaces	35 (garage)	Yes + 7 extra spaces
Subtotals	**21 units**	**40 beds**	–	**38**	**45**	Yes
Village Center						
Village Center	Total of 98 units for all 5 buildings	–	–	98 resident and 33 employee/guest spaces	98 resident and 54 employee/guest spaces	Yes +21 extra spaces
Subtotals	**98**	–	–	**131**	**152**	Yes
Common Area Support Services[1]						
Clubhouse (Existing Building)	–	–	14,000 sf	–	8	N/A
Pool Building	–	–	4,700 sf	–	4	N/A

	Number of Units	Number of Beds	Nonresidential Square Footage	Required Parking	Proposed Parking	Parking Requirements Met?
Community Barn	–	–	3,600 per building (7,200 total) sf	–	6	N/A
Cohousing Common House	–	–	2,165 sf	–	–	N/A
Subtotals	–	–	**28,065 sf**	–	**18**	
Totals	**335 units**	**40 beds**	**28,065 sf**	**462 spaces + 43 employee spaces = 505 spaces**	**540 spaces**	**Yes**

[1] *The common area support services are not considered administrative and would not be subject to the 1 space per 300 square feet requirement. No parking standard for support services is included in the proposed CCRC development standards.*

Source: SCO 2011

As shown, the proposed parking would meet the requirements of the proposed CCRC development standards. Central underground parking (garage) would be provided below the Village Center and lodge buildings, and all surface parking would be angled off-street parking with shade trees. All parking would be required to be consistent with the requirements of Nevada County Land Use and Development Code, Section L-II 4.2.9, Parking, which includes parking lot design standards, parking space standards, wheelchair accessible parking requirements, and parking lot construction standards.

In addition, the proposed project includes reserved spaces throughout the project site in order to increase parking capacity if needed. All cottages would include adjacent site area for an optional single-car garage, and all duplexes would include adjacent site area for optional parking.

The proposed project components/policies would reduce the need for vehicle use, and thus for parking, on the project site, and the project would provide adequate parking for residents, guests, and employees. Therefore, this impact would be considered **less than significant**.

Mitigation Measures

None required.

Alternative Transportation (Standard of Significance 6)

Impact 3.14.7 The proposed project would not conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks). This impact would be **less than significant**.

The Nevada County Land Use and Development Code, Section L-II 4.1.9, Transportation Alternatives, requires all projects to consider methods for reducing dependence on the automobile by addressing alternative transportation opportunities for employees, residents, and/or customers served by the project. The proposed project is intended to provide a pedestrian-oriented environment with maximum on-site travel, and the site design locates shopping, services, and activities within walking distance of the residences in order to reduce

the need for off-site trips (the farthest house would be less than a half mile from the mixed-use Village Center). In addition, the project would offer alternative on-site transportation options including staff-driven vehicles (golf carts) and employee-facilitated carpooling and organized ridesharing. Shared vehicles, electric cars, and bicycles would also be available for residents. The project also proposes to provide a minimum of two paratransit vehicles, ADA equipped for the purposes of transporting residents within the facility to various business appointments, grocery and service needs, recreation, and special events. As such, the proposed project would be consistent with County Code requirements for all projects to consider methods for reducing dependence on the automobile. Impacts would be considered **less than significant**.

Mitigation Measures

None required.

3.14.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for traffic and circulation consists of traffic generated by all existing and future (cumulative) development in the project area. For the purposes of this analysis, the planning horizon for future traffic condition considers buildout to 2030.

Background Traffic Volume Forecasts

Future traffic volumes were developed based on the most recent NCTC traffic model and the Higgins Marketplace traffic study completed in 2009.

The traffic model considered buildout to 2030. Future traffic volumes along SR 49 included development of the Higgins Marketplace project and the Tintle property southeast of that site. The Higgins Marketplace study removed traffic generated by the previous zoning and manually added the projected Higgins Marketplace trips. Traffic volumes along SR 49 at Rincon Way were based on the growth rates for the SR 49/Streeter Road intersection. This intersection was the southernmost intersection studied for Higgins Marketplace, and the growth rates determined for this intersection along SR 49 were applied to the AM and PM peak hours at Rincon Way.

Future traffic projections along Rincon Way were based on the assumed full development of the area; this included development of the existing AG-5 zoned lands with access to SR 49 via Rincon Way. The surrounding undeveloped AG-5 area comprises about 70 acres; this would develop 14 single-family residences and was confirmed by the County. Trip generation for these 14 additional residential units was completed based on ITE's *Trip Generation* (2008) and is shown in **Table 3.14-9**. As shown, under cumulative conditions without the proposed project, 134 daily trips, 11 peak AM trips, and 14 peak PM trips are projected to be added along Rincon Way.

TABLE 3.14-9
FUTURE DEVELOPMENT TRIP GENERATION

Land Use	Size	Trip Rates				
		Daily	AM		PM	
AG-5 (Single Family Residential – LU 210)	14 Units	9.57	0.75		1.01	
			In	Out	In	Out
			25%	75%	63%	37%
		Trips Generated				
Total New Trips		134	3	8	9	5

Source: KD Anderson 2011, p. 15

Future Traffic Conditions Intersection Levels of Service

Figure 3.14-4 displays the future (cumulative) traffic volumes for the SR 49/Rincon Way intersection. No roadway improvements are expected at the intersection. **Table 3.14-10** displays the average AM and PM peak hour level of service at the intersection under cumulative conditions. As noted in the Standards of Significance, the LOS for the intersection takes into account the total amount of traffic using the intersection. Therefore, as SR 49 handles most of the traffic and SR 49 traffic is allowed to proceed unimpeded through the intersection, the average "delay" at the intersection is very small for most of the traffic. Even though traffic at one of the turning movements may experience a longer delay, it is a small amount of traffic when compared to the overall amount using the intersection. From an impact standpoint, if the amount of traffic experiencing a delay is small during the peak hour and signal warrants are not met, the impact is considered less than significant.

TABLE 3.14-10
AM / PM PEAK HOUR INTERSECTION LEVELS OF SERVICE
FUTURE CONDITIONS

Location	Control	AM Peak Hour		PM Peak Hour		Meets Traffic Signal Warrants?	
		LOS	Average Delay (seconds)	LOS	Average Delay (seconds)	Del	Vol
SR 49/Rincon Way	WB Stop						
Avg. delay		A	0.2	A	0.4	No (No)	No (No)

Source: KD Anderson 2011, p. 17

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Traffic Impacts

Impact 3.14.8 Implementation of the proposed project, along with other traffic generated by existing and future development in the project area, would increase traffic in the project area. This is a **less than cumulatively considerable** impact.

Proposed CCRC Development

Implementation of the proposed project, along with other traffic generated by existing and future development in the project area, would increase traffic in the project area. Cumulative impacts associated with developing the proposed uses on the project site were identified by superimposing project traffic onto the future conditions identified under Cumulative Setting above.

Trip Distribution

Under future conditions, traffic to and from the project site would continue to be via SR 49 and Rincon Way. The trip distribution under future conditions would be expected to change based on commercial development north of the project site attracting trips. While many of the destinations trips would be maintained to the south, new destinations including Higgins Marketplace would be constructed to the north. **Table 3.14-11** provides the projected future trip distribution for the project during the peak periods.

TABLE 3.14-11
FUTURE PROJECT TRIP DISTRIBUTION

Route	% of Total	
	AM	PM
North on SR 49	40%	50%
South on SR 49	60%	50%
Total	**100%**	**100%**

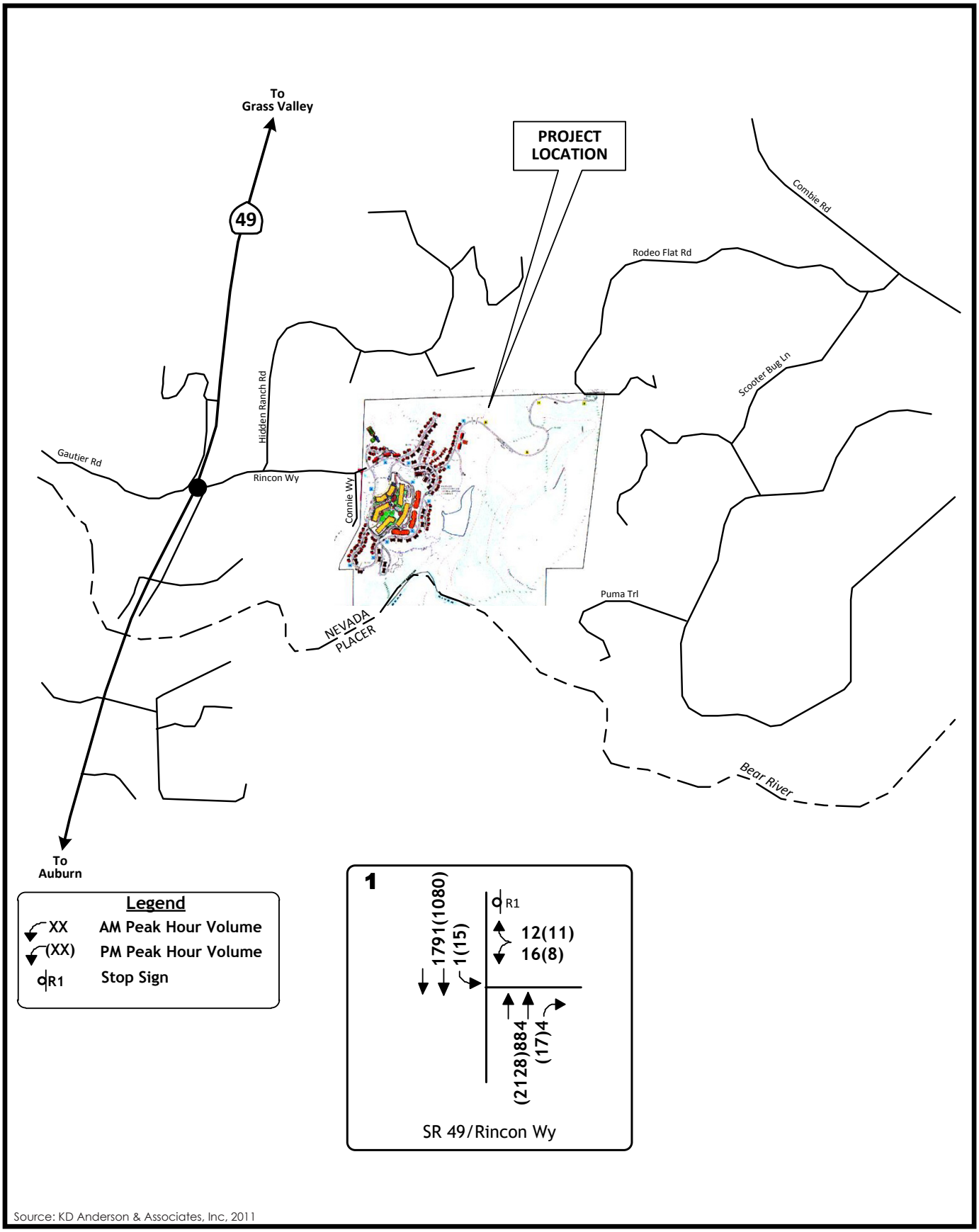
Source: KD Anderson 2011, p. 17

Trip Assignment

Future project traffic volumes and lane configurations are shown in **Figure 3.14-5**. This traffic was then added to existing peak hour volumes based on the future distribution percentages. **Figure 3.14-6** displays the future plus project generated traffic anticipated for the study intersection in both AM and PM peak hours.

Levels of Service

Table 3.14-12 displays the average AM and PM peak hour LOS at the SR 49/Rincon Way intersection under future conditions without the project and under future conditions with the project fully developed. The SR 49/Rincon Way intersection would operate at an average of LOS A in both the AM and PM peak hours under the future plus project cumulative scenario.



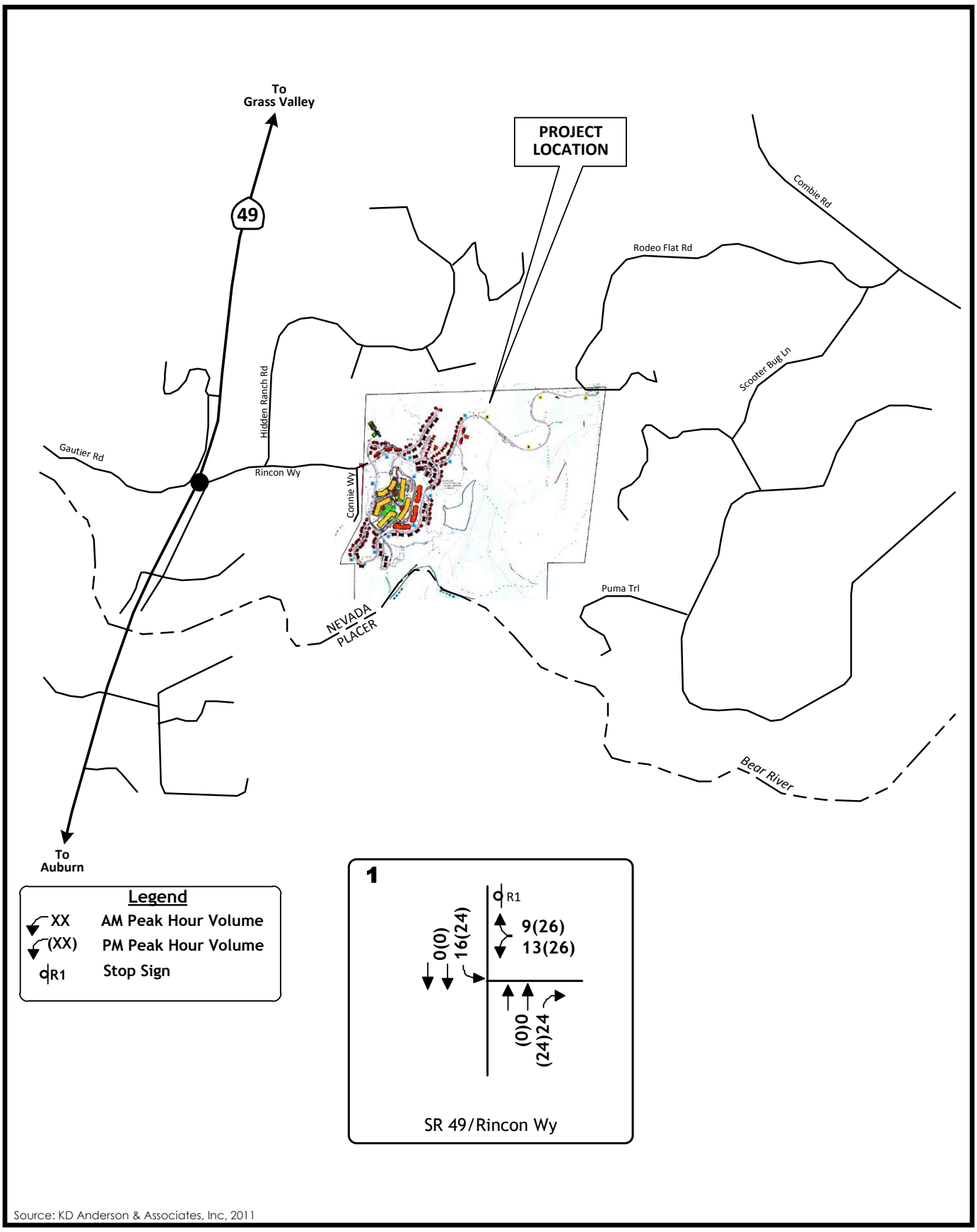
Source: KD Anderson & Associates, Inc, 2011

N

Figure 3.14-4

Future Traffic Volumes and Lane Configurations

PMC



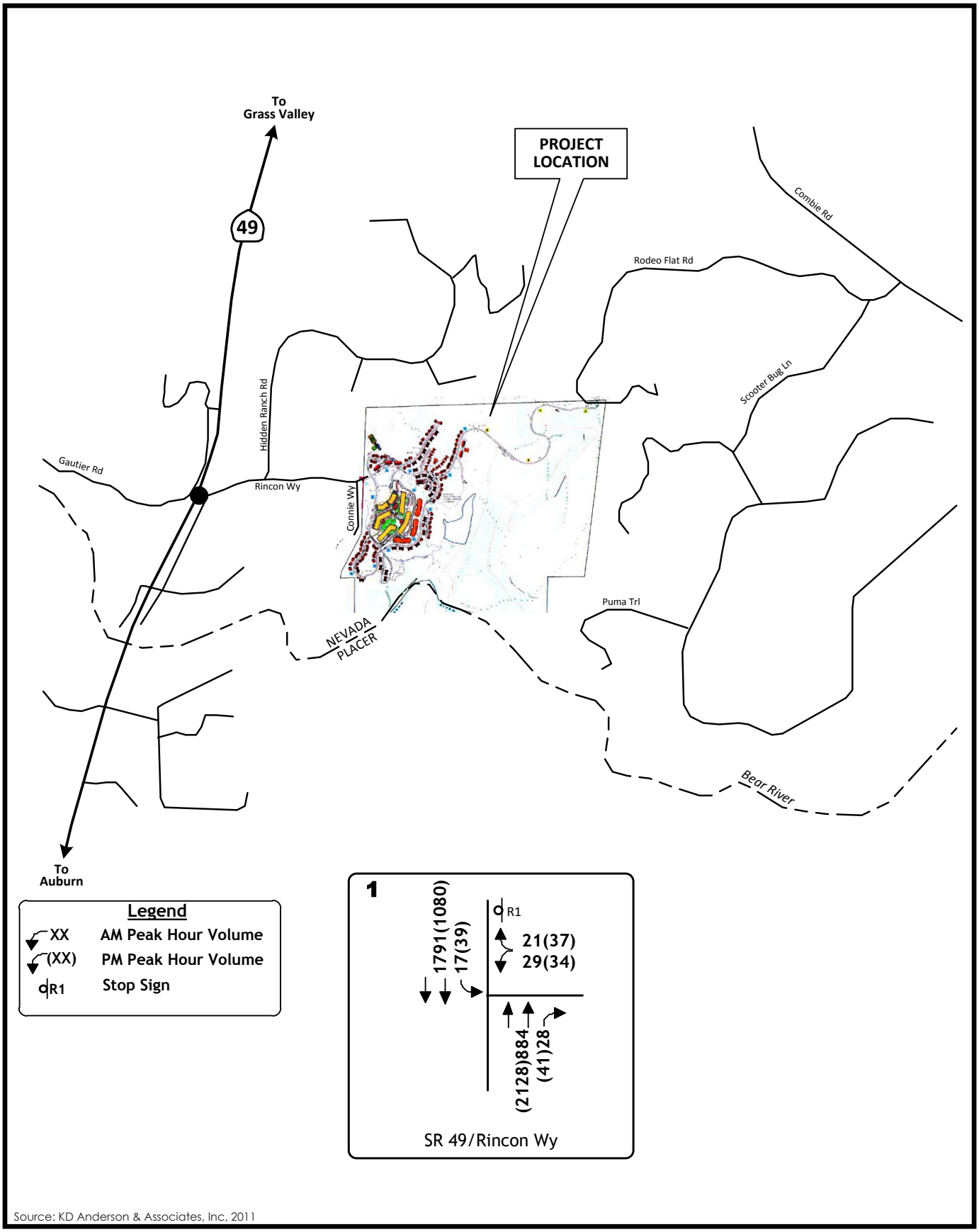
Source: KD Anderson & Associates, Inc, 2011

N

Figure 3.14-5

Future Project Traffic Volumes and Lane Configurations

PMC®



Source: KD Anderson & Associates, Inc, 2011

N

Figure 3.14-6

Future Plus Project Traffic Volumes and Lane Configurations

PMC®

TABLE 3.14-12
PEAK HOUR INTERSECTION LEVELS OF SERVICE
FUTURE PLUS PROJECT CONDITIONS

Location	Control	Future				Future Plus Project					
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		Meets Traffic Signal Warrants?	
		LOS	Average Delay	LOS	Average Delay	LOS	Average Delay	LOS	Average Delay	Del	Vol
SR 49/ Rincon Way	WB Stop									No (No)	
Avg. delay		A	0.2	A	0.4	A	0.4	A	2.0	No (No)	

Source: KD Anderson 2011, p. 21

The LOS impacts to this intersection would not be substantial under the future plus project cumulative scenario.

Under the future plus project cumulative scenario, the westbound approach would operate at LOS C in the AM peak hour and LOS F in the PM peak hour. While the LOS F delay is not within the County rural LOS threshold, the Nevada County LOS standard focuses on the average delay experienced by the intersection as a whole. In addition, the additional traffic generated by the project would not meet the peak hour signal warrant. As noted previously, a traffic impact can be considered adverse but not significant if the LOS standard is exceeded but the projected traffic does not satisfy traffic signal warrants. Under these conditions, the only means to completely alleviate delays to stop-controlled vehicles would be to install a traffic signal. Under future plus project conditions, the westbound approach would operate under adverse conditions as the LOS would be exceeded along Rincon Way, and the intersection would not meet the peak hour signal warrant. This adverse condition is not considered a significant impact as the Nevada County LOS standard focuses on the average delay experienced by the intersection as a whole and the installation of an unwarranted signal would unnecessarily increase the delay for the remainder of the traffic using the intersection and actually diminish the efficiency of the intersection for this volume of traffic. In addition, it is important to note that the westbound approach is the most minor turning movement of the SR 49/Rincon Way intersection in terms of number of automobiles and relatively few cars would make this particular movement in comparison to north and southbound traffic on SR 49. Not only will the intersection operate at LOS A overall, north and southbound traffic on SR 49 would not experience an increase of delays. As such, installation of a traffic signal is not a recommended mitigation. Sight distance looking both northbound and southbound on SR 49 is approximately 1,500 feet, which is adequate for this intersection.

The project would contribute traffic to the SR 49/Combie Road/Wolf Road intersection. Under Future conditions the Marketplace Traffic Impact Analysis (TIA) level of service calculations dated March 3, 2009 indicated that the northbound, southbound and westbound approaches to the intersection will operate at LOS D in the a.m. peak hour. The levels of service indicate that there is available capacity along these movements to accommodate additional traffic. The eastbound approach will operate at LOS F. The overall intersection LOS is LOS D. Addition of project traffic in the a.m. peak hour at this intersection is limited as noted in the TIA based on most projected origins and destinations to and from the south. The traffic from north of the

project is expected to travel through the SR 49 / Combie Road intersection to and from north of Combie Road and along Combie Road. No traffic is expected to travel along Wolfe Road as the origins along Wolfe Road include residential housing, while the known destination includes an elementary school, both would not be expected to have traffic to or from the project site. The project traffic would add traffic along the northbound, southbound and westbound directions; however, as noted above, there is adequate capacity along these movements that should accommodate the project traffic.

Thus, project contributions to cumulative intersection impacts would be less than cumulatively considerable.

As identified in Table 3.14-13, the proposed project's traffic on SR 49 mainline would not result in any level of service operation impacts under cumulative conditions. Thus, impacts to the SR 49 mainline is less than cumulatively considerable.

TABLE 3.14-13
FUTURE AND FUTURE PLUS PROJECT SR 49 SEGMENT LEVELS OF SERVICE

Roadway	Location	Facility Classification	Standard		Future Condition		Future + Project Condition	
			LOS	Daily Volume Threshold	Daily Volume	LOS	Daily Volume	LOS
State Route 49	North of Rincon Way	Principal Arterial	D	51,300	42,883	C	43,455	C
	South of Rincon Way	Principal Arterial	D	51,300	42,883	C	43,271	C

Source: KD Anderson, 2012

General Plan and Zoning Ordinance Text Amendments

As discussed in further detail in Section 4.0, Cumulative Impacts Summary, the proposed General Plan and Zoning Ordinance text amendments are policy actions that would not directly increase traffic in the cumulative setting. Although CCRCs would be permitted in either a PD (Planned Development) or SDA (Special Development Area) land use designation with approval of a zone change after implementation of the proposed project, such rezoning applications would be subject to further CEQA analysis of project-specific impacts (proposed Zoning Ordinance amendment Section L.II 2.7.11(C)(4)), including traffic impacts. At a programmatic level, the environmental impacts associated with development of all PD and SDA designated areas in the county were analyzed in the Nevada County General Plan Environmental Impact Report, Volume I, SCH #1995102136 (1995). Future site-specific CEQA analysis would result in project-specific mitigation to address impacts. Therefore, cumulative traffic impacts associated with the proposed General Plan and Zoning Ordinance text amendments are considered less than cumulatively considerable.

Mitigation Measures

None required.

Cumulative Queuing Impacts

Impact 3.14.9 The SR 49/Rincon Way intersection would not expected to have queuing issues under future plus project conditions. Therefore, this impact is considered to be **less than cumulatively considerable**.

As discussed under Impact 3.14.3 above, a queuing analysis was conducted to identify whether adequate storage would be available for vehicles exiting or entering SR 49 after project implementation. **Table 3.14-14** compares queues under future conditions to the projected queues under future conditions after implementation of the proposed project.

TABLE 3.14-14
PROJECTED CUMULATIVE QUEUES

Location	Future		Future + Project	
	AM	PM	AM	PM
SR 49/Rincon Way				
SB Left	<25′	<25′	<25′	<25′
WB Right	<25′	<25′	<25′	82′
Rincon Way/SR 49 Frontage				
NB Right	<25′	<25′	<25′	<25′
WB Left	<25′	<25′	<25′	<25′

Sources: KD Anderson 2011, p. 22

Under future plus project conditions, the projected queue for each of the movements is less than 25 feet except the projected queue along the westbound Rincon Way approach during the PM peak, which under future plus project conditions indicates a queue of 82 feet; this would be about three to four vehicles. Traffic along the frontage road is minimal, and there do not appear to be any issues with traffic blocking the intersection while queuing to enter SR 49. Therefore, impacts would be considered **less than cumulatively considerable**.

Mitigation Measures

None required.

REFERENCES

Adamson, Troy. 2011. Fire Captain/Deputy Fire Marshall, California Department of Forestry and Fire Protection. Personal communication. September 6.

Caltrans (California Department of Transportation). 2006. *Manual on Uniform Traffic Control Devices for Streets and Highways FHWA's MUTCD 2003 Edition, as amended for use in California.*

———. 2009. *Traffic and Vehicle Data Systems*. http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/.

ITE (Institute of Transportation Engineers). 2008. *Trip Generation, 8th Edition*. Washington D.C.

KD Anderson & Associates, Inc. 2011. *Traffic Impact Analysis for Rincon del Rio Continuing Care Retirement Community, Nevada County, CA*.

Nevada County. 1995. *Nevada County General Plan Environmental Impact Report, Volume I, Final Draft*.

———. 1996. Updated 2008 and 2010. *Nevada County General Plan, Volume I: Goals, Objectives, Policies and Implementation Measures.*

———. June 2003. *Roadside Vegetation Management Plan*.

NCTC (Nevada County Transportation Commission). 2010. *Memorandum. Western Nevada County Regional Transportation Fee Mitigation Program, Annual Report for FY 2009/10*.

SCO Planning, Engineering, and Surveying. 2011. *Total Unit Count and Occupancy per Unit*. Grass Valley, CA.

TRB (Transportation Research Board). 2000. *Special Report 209, Highway Capacity Manual 2000.* Washington, D.C.