Traffic Impact Analysis

8325 Quail Canyon Rd Project

Solano County

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8325 Quail Canyon Road Horse Stables Project
Solano County

TRAFFIC IMPACT ANALYSIS

1) EXECUTIVE SUMMARY

This traffic impact analysis describes the existing and future conditions for transportation with and without the proposed project, which consists of construction of public horse stables to accommodate a maximum of 48 horses. The project would involve construction of 17,120 square feet of enclosed building space (including barns but excluding arenas). The project will also include construction of a 10,800 square foot open sided covered riding arena. This study presents information on the regional and local roadway networks that serve the project site, the pedestrian and transit conditions in the area, and provides an analysis of the effects on transportation facilities associated with the project.

This study also describes the regulatory setting; the criterion used for determining the significance of environmental impacts; and summarizes potential environmental impacts and appropriate mitigation measures. This study has been conducted in accordance with the requirements and methodologies set forth by Solano County, the Solano Transportation Authority (STA), Caltrans, and the applicable provisions of CEQA. Based on the project's design and a detailed analysis conducted according to the required transportation impact analysis guidelines there would be no significant transportation impacts according to established traffic engineering standards and no off-site traffic or transportation mitigations would be required.

2) PROJECT DESCRIPTION

As noted above, the Double T Ranch stables project is proposed to accommodate a maximum of 48 horses. The project would involve construction of 17,120 square feet of enclosed building space (including barns but excluding arenas). The project will also include construction of a 10,800 square foot open sided covered riding arena. The primary access to the site would be via Quail Canyon Road and Pleasants Valley Road. **Figure 1** shows the location of the project and the surrounding roadway network. **Figure 2** shows the proposed site plan for the project.

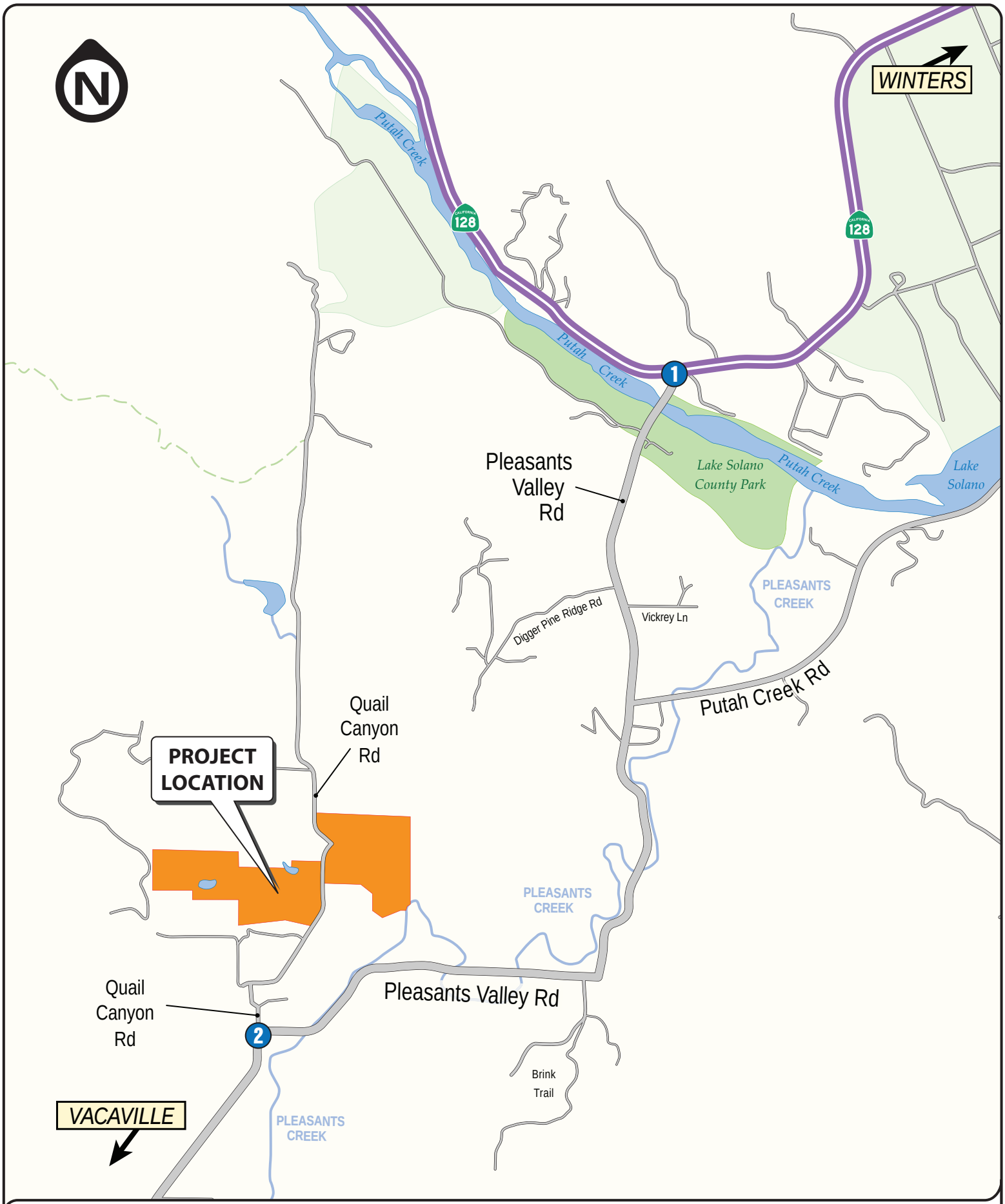

FIGURE 1 | PROJECT LOCATION & STUDY INTERSECTIONS
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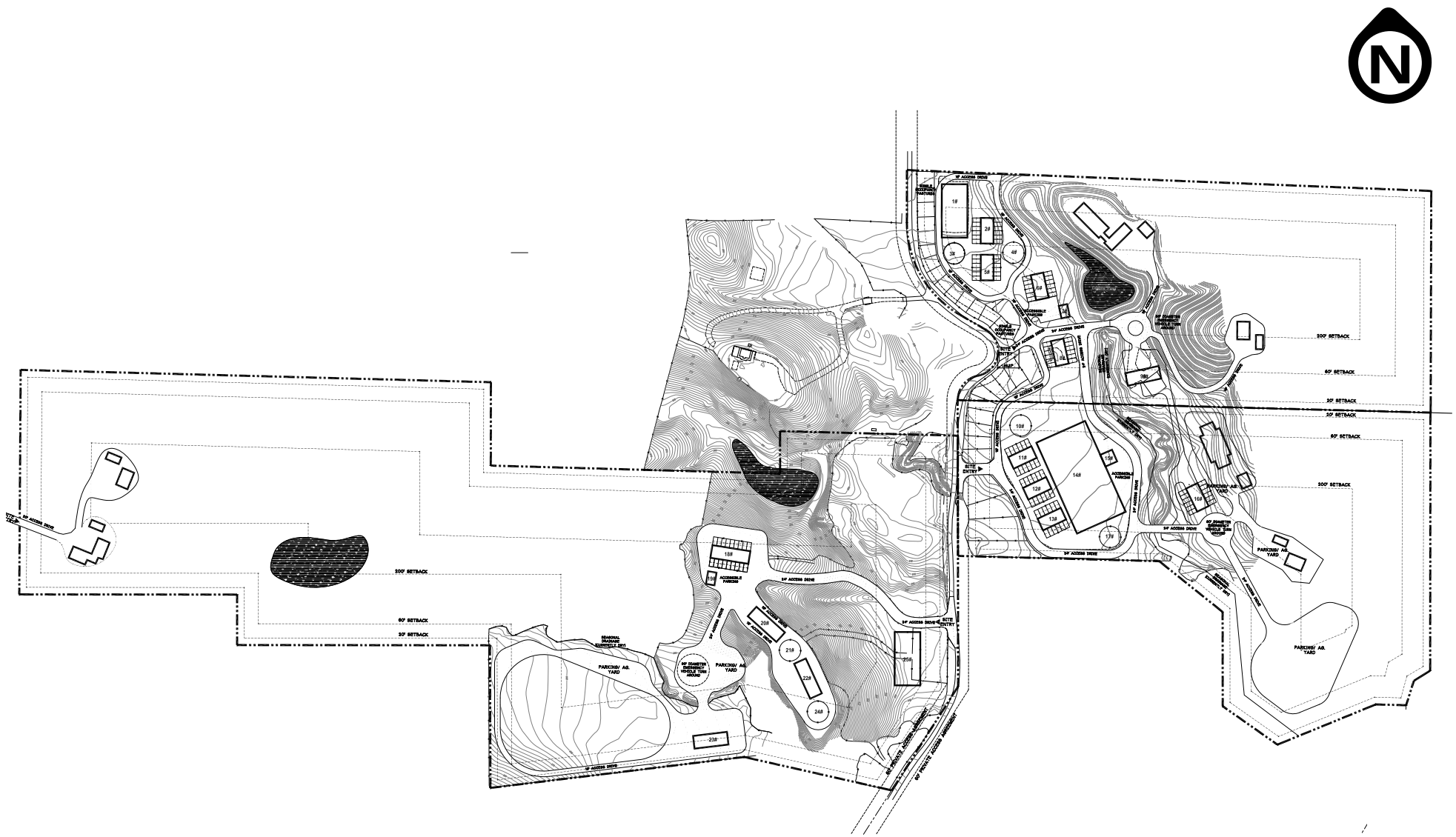

FIGURE 2 | SITE PLAN
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3) ENVIRONMENTAL SETTING

This section of the report describes the roadways, traffic conditions and other existing transportation characteristics in the vicinity of the project. The primary basis of the analysis is the peak hour level of service for the key intersections. Throughout this report, these peak hours will be identified as the AM and PM peak hours.

3.1 Project Study Intersections

Based on the project's trip generation and the potential for traffic impacts a list of study intersections was prepared. **Figure 1** shows the location of the project study intersections. As mentioned above, all access to the site will be via driveways onto Quail Canyon Road. There are two study intersections included in the analysis.

Project Study Intersections

1. *Pleasants Valley Road at State Route 128*
2. *Pleasants Valley Road at Quail Canyon Road*

3.2 Traffic Analysis Scenarios

The study intersections were evaluated for the following six scenarios:

- Scenario 1: *Existing Conditions* – Level of Service (LOS) based on existing peak hour volumes and existing intersection configurations.
- Scenario 2: *Existing Plus Project* – Existing traffic volumes plus trips from the proposed project.
- Scenario 3: *Baseline (No Project) Conditions* – The Baseline (Year 2023) scenario is based on the existing volumes plus growth in background traffic plus the traffic from all reasonably foreseeable developments that could substantially affect the volumes at the project study intersections. This scenario also includes the traffic from the planned second phase of the project which would accommodate an additional 72 horses. For this analysis it was also conservatively assumed that traffic would fully return to pre-covid levels by 2023.
- Scenario 4: *Baseline Plus Project Conditions* – This scenario is based on the Baseline traffic volumes plus the trips from the proposed project.
- Scenario 5: *Cumulative Conditions* – This scenario includes year 2040 cumulative volumes based on planned projects and the Countywide Model.

- Scenario 6: *Cumulative Plus Project Conditions* – This scenario includes year 2040 cumulative volumes based on the Countywide Travel Demand Model plus the trips from the proposed project. This also includes the traffic from the planned second phase of the project which would accommodate an additional 72 horses.

3.3 Existing Roadway Network

As discussed previously, the project location and the surrounding roadway network are illustrated in **Figure 1**. The following is a more detailed description of the arterials that could be affected by the project:

- **State Route 128** – State Route 128 is a two lane generally eas-west route that extends east from the Town of Geyserville through the Napa Valley to eventually terminate at Interstate 5 just east of the City of Winters.

- **Pleasants Valley Road** – Pleasants Valley Road is a two lane rural collector road that extends south from State Route 128. Pleasants Valley Road extends along the outskirts of the City of Vacaville to terminate at Cherry Glen Road to the south.

- **Quail Canyon Road** – Quail Canyon Road is a two lane local roadway that extends north from Pleasants Valley Road to a dead end to the north. The roadway primarily serves residential and agricultural uses in the area.

3.4 Intersection Analysis Methodology

Existing operational conditions at the seven (7) study intersections have been evaluated according to the requirements set forth by Solano County. Analysis of traffic operations was conducted using the 6th Edition of the *Highway Capacity Manual* (*HCM*) Level of Service (LOS) methodology with Synchro software.[1] Level of service is an expression, in the form of a scale, of the relationship between the capacity of an intersection (or roadway segment) to accommodate the volume of traffic moving through it at any given time. The level of service scale describes traffic flow with six ratings ranging from A to F, with "A" indicating relatively free flow of traffic and "F" indicating stop-and-go traffic characterized by traffic jams. As the amount of traffic moving through a given intersection or roadway segment increases, the traffic flow conditions that motorists experience deteriorate as the capacity of the intersection is reached. Under such conditions relatively small incidents (e.g., momentary engine stall) can cause considerable fluctuations in speeds and delays that lead to traffic congestion. This near-capacity situation is labeled level of service (LOS) E. Beyond LOS E, the intersection or roadway segment capacity has been exceeded, and arriving traffic will exceed the ability of the intersection to accommodate it.

[1] *Highway Capacity Manual – Sixth Edition*, Transportation Research Board, Washington D.C., 2016.

For signalized intersections, The *HCM* methodology determines the capacity of each lane group approaching the intersection. The LOS is then based on average control delay (in seconds per vehicle) for the various movements within the intersection. A combined weighted average control delay and LOS are presented for the intersection. A summary of the HCM results and copies of the detailed HCM LOS calculations are included in the appendix to this report. **Table 1** summarizes the relationship between LOS, average control delay, and the volume to capacity ratio at signalized intersections. For unsignalized (all-way stop controlled and two-way stop controlled) intersections, the average control delay and LOS operating conditions are calculated by approach (e.g., northbound) and movement (e.g., northbound left-turn) for those movements that are subject to delay. In general, the operating conditions for unsignalized intersections are presented for the worst approach. **Table 2** summarizes the relationship between LOS and average control delay at unsignalized intersections.

3.5 Existing Intersection Capacity Conditions (Scenario 1)

The existing intersection geometry at each of the project study intersections can be seen in **Figure 3** and the existing traffic volumes at each are presented in **Figure 4.** Traffic counts at the study intersections were conducted in May of 2022. **Table 3** summarizes the associated LOS computation results for the existing weekday AM and PM peak hour conditions. Please note that the corresponding LOS analysis calculation sheets are presented in the *Traffic Analysis Appendix.* All study intersections currently have acceptable conditions (based on County standards) during the weekday AM and PM peak hours.

TABLE 3
EXISTING INTERSECTION LEVEL OF SERVICE CONDITIONS

INTERSECTION		CONTROL	PEAK HOUR	EXISTING	
				Delay	LOS
1	STATE HIGHWAY 128 & PLEASANTS VALLEY ROAD	Side Street Stop	AM	9.1	A
			PM	10.0	B
2	PLEASANTS VALLEY ROAD & QUAIL CANYON ROAD	Side Street Stop	AM	8.6	A
			PM	8.8	A

SOURCE: Abrams Associates, 2022. **NOTE:** Delay results are presented in seconds per vehicle.

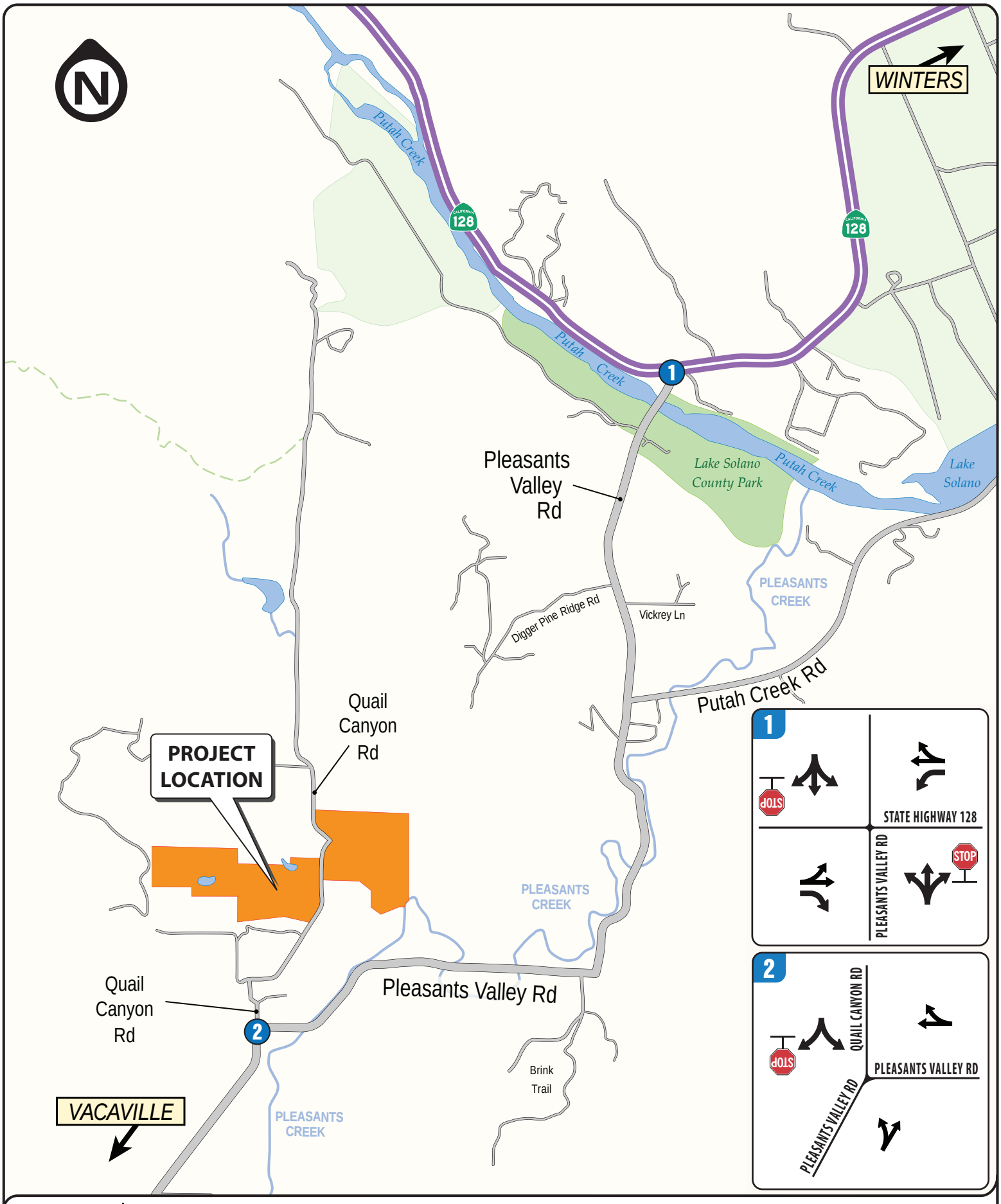

FIGURE 3 | EXISTING LANE CONFIGURATION
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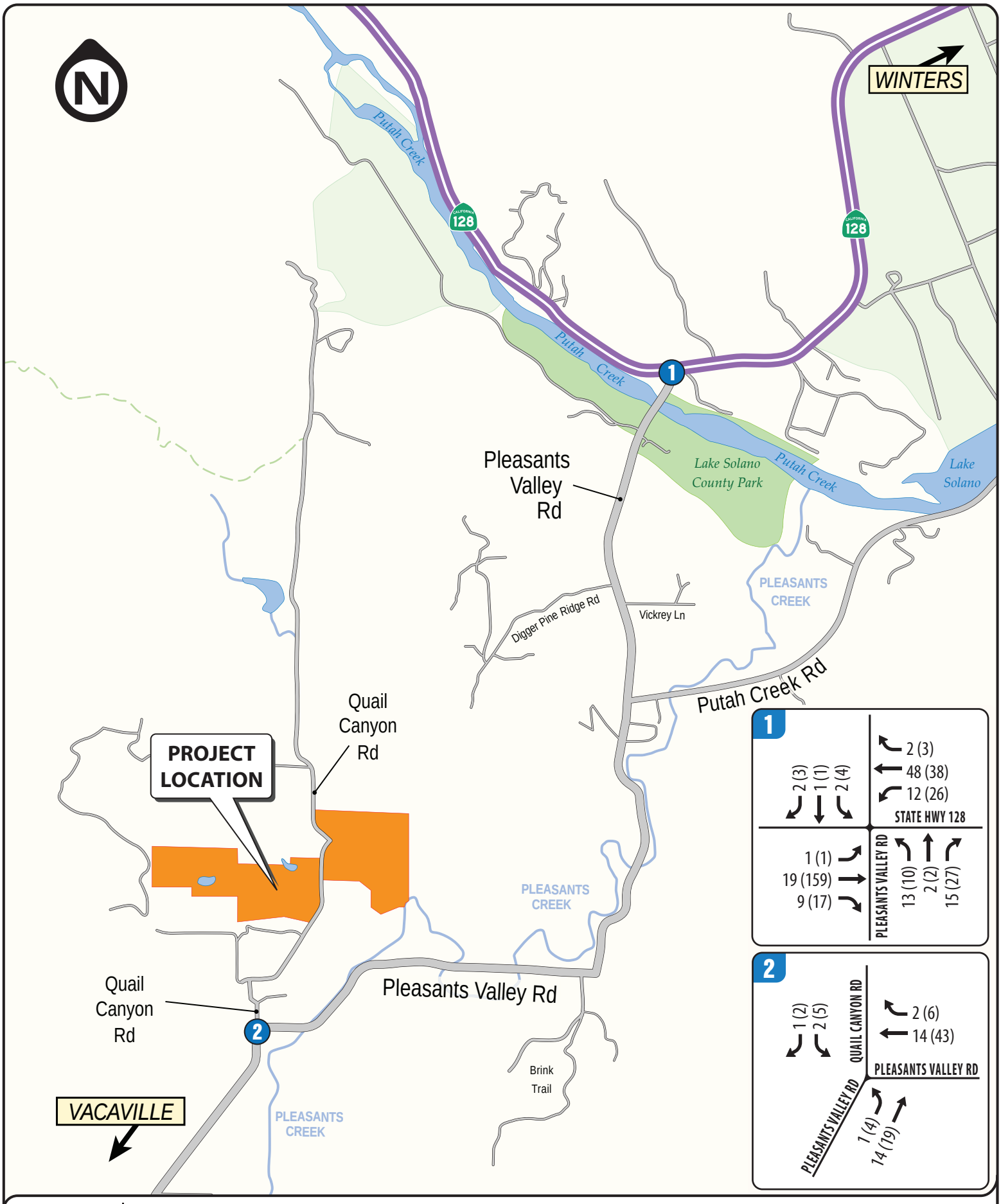

FIGURE 4 | EXISTING AM(PM) PEAK HOUR TRAFFIC VOLUMES

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TABLE 1
SIGNALIZED INTERSECTION LEVEL OF SERVICE DEFINITIONS

Level of Service	Description of Operations	Average Delay (sec/veh)	Volume to Capacity Ratio
A	Insignificant Delays: No approach phase is fully used and no vehicle waits longer than one red indication.	≤ 10	< 0.60
B	Minimal Delays: An occasional approach phase is fully used. Drivers begin to feel restricted.	> 10 to 20	> 0.61 to 0.70
C	Acceptable Delays: Major approach phase may become fully used. Most drivers feel somewhat restricted.	> 20 to 35	> 0.71 to 0.80
D	Tolerable Delays: Drivers may wait through no more than one red indication. Queues may develop but dissipate rapidly without excessive delays.	> 35 to 55	> 0.81 to 0.90
E	Significant Delays: Volumes approaching capacity. Vehicles may wait through several signal cycles and long vehicle queues from upstream.	> 55 to 80	> 0.91 to 1.00
F	Excessive Delays: Represents conditions at capacity, with extremely long delays. Queues may block upstream intersections.	> 80	> 1.00

SOURCES: 6th Edition of the *Highway Capacity Manual*, Transportation Research Board, 2016.

TABLE 2
UNSIGNALIZED INTERSECTION LEVEL OF SERVICE DEFINITIONS

Level of Service	Description of Operations	Average Delay (seconds/vehicle)
A	No delay for stop-controlled approaches.	0 to 10
B	Operations with minor delays.	> 10 to 15
C	Operations with moderate delays.	> 15 to 25
D	Operations with some delays.	> 25 to 35
E	Operations with high delays and long queues.	> 35 to 50
F	Operation with extreme congestion, with very high delays and long queues unacceptable to most drivers.	> 50

SOURCE: 6th Edition of the *Highway Capacity Manual*, Transportation Research Board, 2016.

3.6 Pedestrian and Bicycle Facilities

Bicycle paths, lanes and routes are typical examples of bicycle transportation facilities, which are defined by Caltrans as being in one of the following four classes:

Class I – Provides a completely separated facility designed for the exclusive use of bicyclists and pedestrians with crossing points minimized.

Class II – Provides a restricted right-of-way designated lane for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and cross-flows by pedestrians and motorists permitted.

Class III – Provides a route designated by signs or permanent markings and shared with pedestrians and motorists.

Class IV – Provides an adjacent bike lane or bikeway that is physically separated from motor vehicle traffic.

In the immediate project vicinity there are no sidewalks or existing bike lanes. but an extension of the Bay Trail is proposed along Broadway adjacent to the project site.

3.7 Transit Service

Two major public transit operators provide service adjacent to the study area. These include the Solono County Transit and Yolo County Transportation District. However, there are no fixed route bus services operating near the project site.

4) REGULATORY CONTEXT

Existing policies, laws and regulations that apply to the proposed project are summarized below.

4.1 State

The California Department of Transportation (Caltrans) has jurisdiction over State highways. Therefore, Caltrans controls all construction, modification, and maintenance of State highways, such as SR 29. Any improvements to these roadways would require Caltrans' approval. The Guide for the Preparation of Traffic Impact Studies provides consistent guidance for Caltrans staff who review local development and land use change proposals. The Guide also informs local agencies about the information needed for Caltrans to analyze the traffic impacts to state highway facilities which include freeway segments, on- or off-ramps, and signalized intersections.

Solano County General Plan - The Transportation and Circulation Element included in the Solano County General Plan was prepared pursuant to Section 65302(b) of the California Government Code. The Transportation and Circulation Element addresses the location and extent of existing and planned transportation routes, terminals, and other local public utilities and facilities. The General Plan identifies roadway and transit goals and policies that have been adopted to ensure that the transportation system of the County will have adequate capacity to serve planned growth. These goals and policies are intended to provide a plan and implementation measures for an integrated, multi-modal transportation system that will safely and efficiently meet the transportation needs of all economic and social segments of the County.

4.3 Level-of-Service Analysis Criteria

The advisory standard of Solano County is to maintain Level of Service (LOS) C during the peak hours "*except where the existing LOS is already below C, the project will be designed such that there will be no decrease in the existing level of service*."

Signalized Intersections - Project-related operational effects on the County's signalized study intersections are considered to result in substantial adverse effects if project-related traffic causes the Level of Service (LOS) rating to deteriorate from LOS C or better to LOS D, E or F.

Unsignalized Intersections - Project-related operational effects on unsignalized intersections are considered to result in substantial adverse effects if project generated traffic causes the LOS at an unsignalized intersection to degrade to worse than LOS C.

In addition, according to CEQA guidelines, a project would have a significant impact if it would:

- Conflict with a plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, including transit, roadway, bicycle and pedestrian facilities?
- Would the project conflict with or be inconsistent with CEQA Guidelines Section 15064.3 subdivision (b)?
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment).
- Result in inadequate emergency vehicle access.

5) POTENTIAL ADVERSE EFFECTS AND MITIGATION MEASURES

5.1 Project Trip Generation

The proposed project would consist of public stables (with no horse shows) that would accommodate a maximum of 48 horses. The project would involve construction of 17,120 square feet of enclosed building space (including barns but excluding arenas). The project will also include construction of a 10,800 square foot open sided covered riding arena. The resulting trip generation calculations are shown in **Table 4**. There are no standard Institute of Transportation Engineers (ITE) trip rates for public stables so the trip rates were are based on a recent traffic impact analysis that included detailed surveys of trip generation at some existing public stables.[2] The total trip generation reflects all vehicle trips that would be counted at the project driveways, both inbound and outbound. For purposes of determining the reasonable worst-case impacts of traffic on the surrounding street network from a proposed project, the trips generated by this proposed development are estimated for the peak commute hours which represent the peak of "*adjacent street traffic*". This is the time period when the project traffic would generally contribute to the greatest amount of congestion. As shown in **Table 4**, the residential uses proposed to be added to the site are is forecast to generate approximately 3 trips during the AM peak hour and 19 trips during the PM peak hour.

TABLE 4
PROJECT TRIP GENERATION CALCULATIONS

Land Use	Size	ADT	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Horse Boarding/Training Facility (trips per horse)		1.40	0.06	0.00	0.06	0.11	0.15	0.26
Proposed Project Trip Generation	***48 horses***	***67***	***3***	***0***	***3***	***5***	***7***	***12***

SOURCE: Trip Generation, 11th Edition, Institute of Transportation Engineers, Washington D.C., September, 2021.

5.2 Project Trip Distribution

The trip distribution assumptions have been based on the project's proximity to freeway interchanges, the existing directional split at nearby intersections, and the overall land use patterns in the area. **Figure 5** shows the project traffic that would be added at each of the study intersections.

[2] *Husayniah Religious Facility Traffic Impact Analysis*, Gibson Traffic Consultants, Bothell, WA, June, 2020.

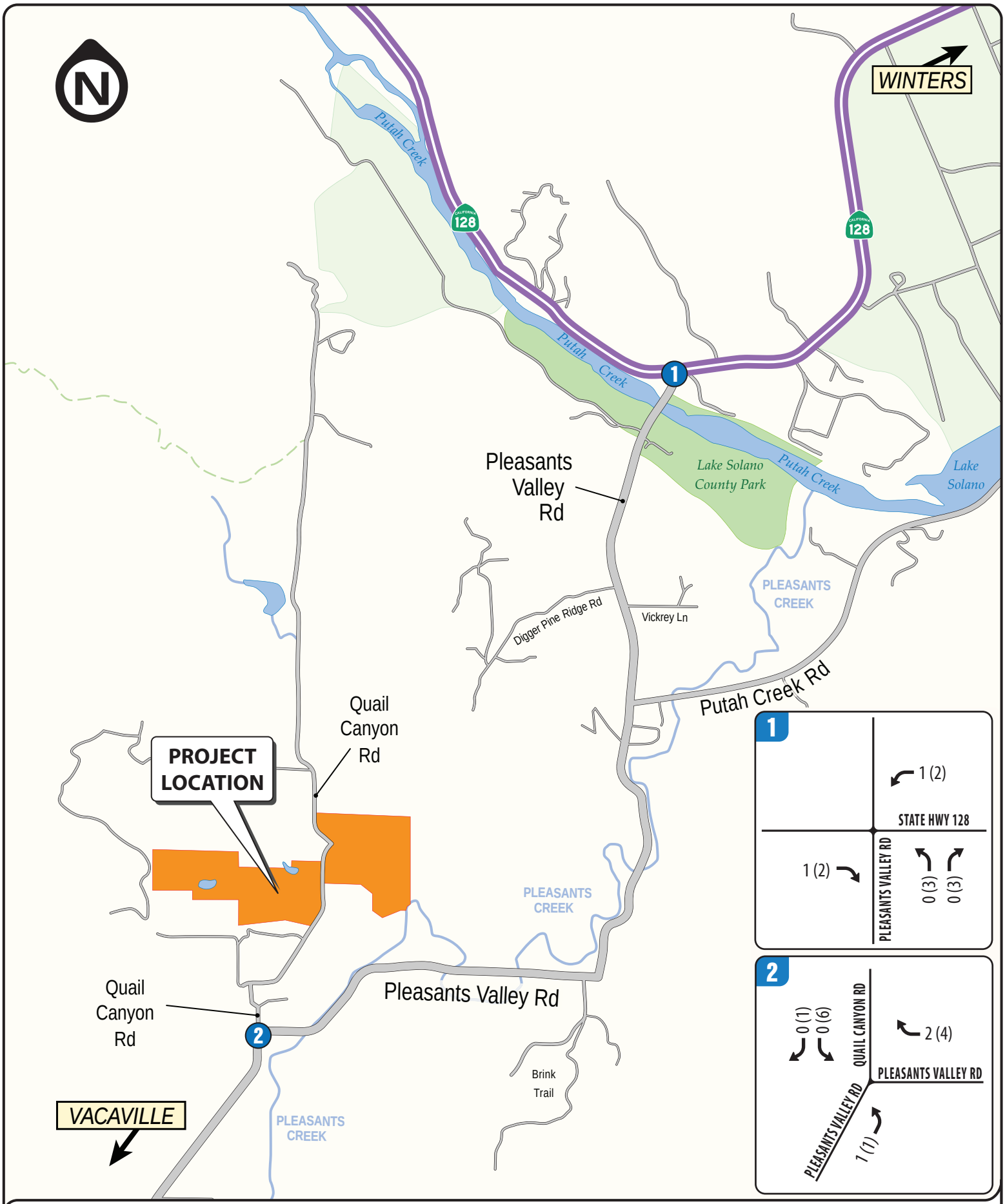

FIGURE 5 | PROJECT AM(PM) PEAK HOUR TRIPS
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5.3 Existing Plus Project Traffic Capacity Conditions (Scenario 2)

This scenario evaluates the existing conditions with the addition of traffic from the proposed project. The capacity calculations for the Existing Plus Project scenario are shown in **Table 5** and the baseline traffic volumes are shown in **Figure 6**. As shown in **Table 5**, all of the existing project study intersections currently have acceptable operations during the weekday AM and PM peak hours.

TABLE 5
EXISTING INTERSECTION LEVEL OF SERVICE CONDITIONS

	INTERSECTION	CONTROL	PEAK HOUR	EXISTING		EXISTING PLUS PROJECT	
				Delay	LOS	Delay	LOS
1	STATE HIGHWAY 128 & PLEASANTS VALLEY ROAD	Side Street Stop	AM	9.1	A	9.1	A
			PM	10.0	B	10.1	B
2	PLEASANTS VALLEY ROAD & QUAIL CANYON ROAD	Side Street Stop	AM	8.6	A	8.6	A
			PM	8.8	A	8.9	A

SOURCE: Abrams Associates, 2022. **NOTE:** Delay results are presented in seconds per vehicle.

5.4 Baseline Traffic Capacity Conditions (Scenario 3)

The Baseline scenario evaluates the existing conditions with the addition of traffic from reasonably foreseeable projects in the area and general baseline growth in traffic. For this analysis the baseline volumes were developed based on the assumption that the project completion and full occupancy date would be 2023 with a conservative assumption that the traffic volumes in the study area will have returned to pre-covid levels. This scenario also includes the traffic from the planned second phase of the project which would accommodate an additional 72 horses. **Table 6** summarizes the LOS results for the Baseline weekday AM and PM peak hour conditions and **Figure 7** presents the baseline traffic volumes. All study intersections are forecast to continue to have acceptable conditions (LOS C or better).

TABLE 6
BASELINE INTERSECTION LEVEL OF SERVICE CONDITIONS

	INTERSECTION	CONTROL	PEAK HOUR	BASELINE		BASELINE PLUS PROJECT	
				Delay	LOS	Delay	LOS
1	STATE HIGHWAY 128 & PLEASANTS VALLEY ROAD	Side Street Stop	AM	9.2	A	9.2	A
			PM	10.5	B	10.6	B
2	PLEASANTS VALLEY ROAD & QUAIL CANYON ROAD	Side Street Stop	AM	8.6	A	8.6	A
			PM	8.9	A	9.1	A

SOURCE: Abrams Associates, 2022. **NOTE:** Delay results are presented in seconds per vehicle.

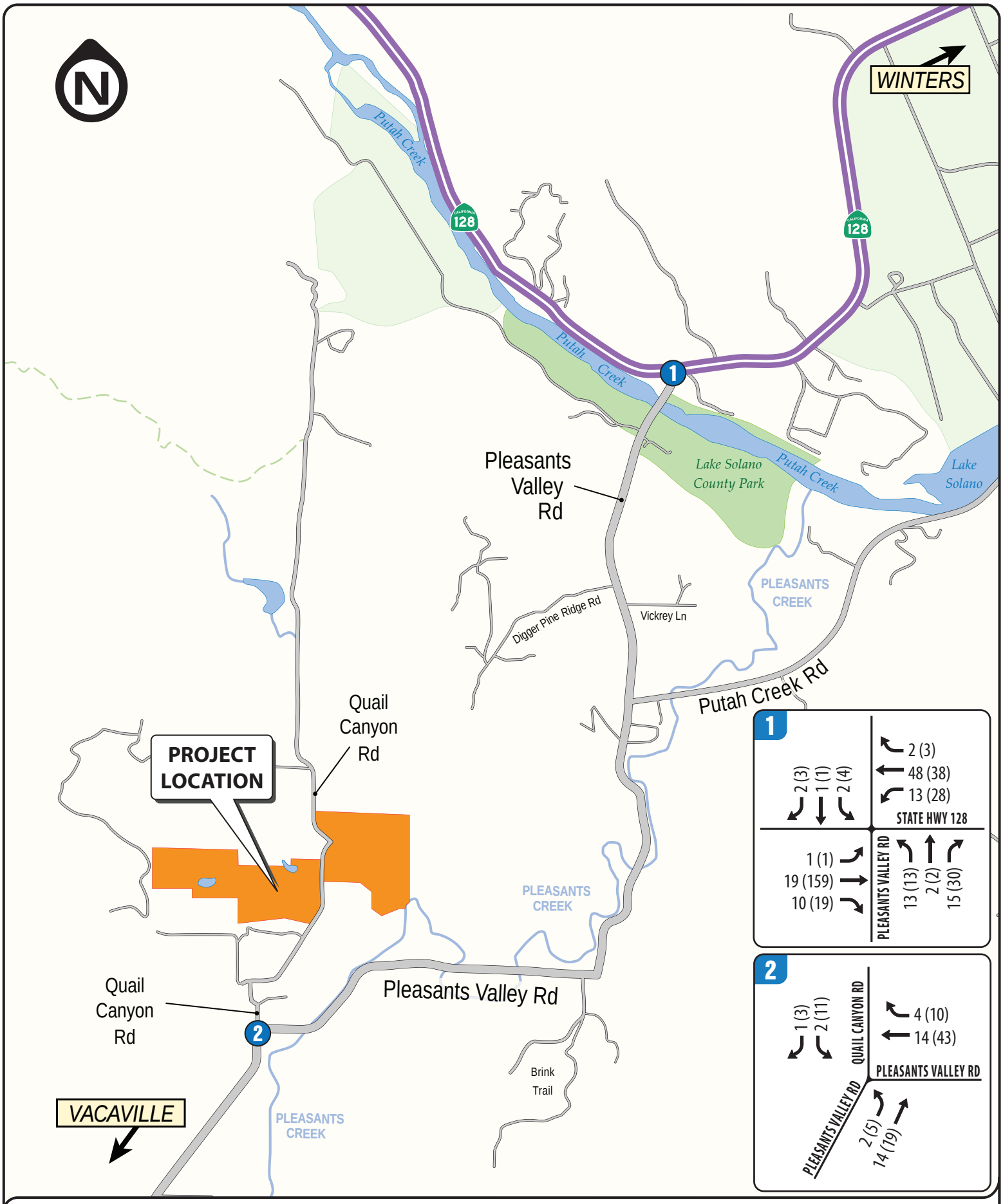

FIGURE 6 | EXISTING PLUS PROJECT AM(PM) PEAK HOUR TRAFFIC VOLUMES

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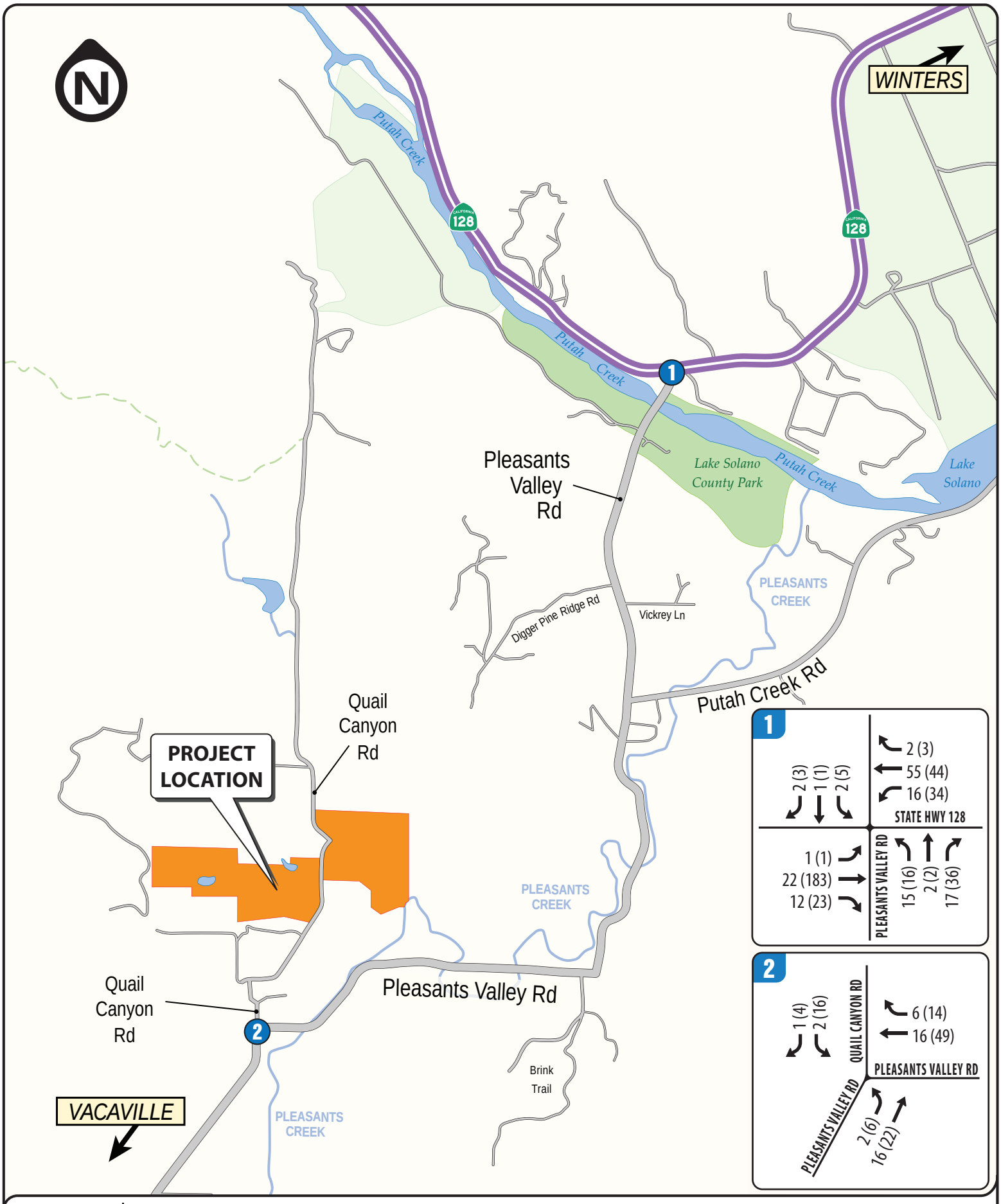

FIGURE 6 | BASELINE AM(PM) PEAK HOUR TRAFFIC VOLUMES

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5.5 Baseline *Plus Project* Traffic Capacity Conditions (Scenario 4)

The Baseline plus proposed project traffic forecasts were developed by adding traffic from proposed project to the baseline traffic volumes. The traffic volumes for each of the study intersections for the Baseline Plus Project scenario are shown in **Figure 8**. **Table 6** summarizes the LOS results for the Baseline and Baseline Plus Project weekday AM and PM peak hour conditions. The corresponding LOS analysis calculation sheets are presented in the appendix. All of the study intersections would continue to have acceptable conditions (LOS C or better) under the Baseline Plus Project scenario during the weekday AM and PM peak hours.

5.6 Internal Circulation and Safety

Internal Circulation - No internal site circulation or access issues have been identified that would cause a traffic safety problem or any unusual traffic congestion or delay. In general, the project was not found to cause (or substantially increase) any safety hazards due to any design features or incompatible uses.

Safety - Although the project would increase vehicle and pedestrian traffic in the project vicinity it is not expected to significantly impact or change the design of any existing facilities or create any new safety problems in the area. Based on the established significance criteria the project's impacts on transportation safety would be less than significant and no mitigation would be required.

Accident History - Caltrans has established restrictions on the use of traffic signals and multi-way stop signs and the California Manual of Uniform Traffic Control Devices (MUTCD) provides detailed guidance on when these applications are appropriate. Caltrans' guidelines state that a traffic signal or all-way stop control shall be considered if: "*Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash*". A detailed review of the accident history in the study area over the past five years was conducted using data available from the California Highway Patrol's Statewide Integrated Traffic Records System (SWITRS).

5.7 Pedestrian and Bicycle Impacts

The County does not have level of service standards for pedestrian or bicycle facilities. Nevertheless, use of existing facilities by the users of the project would not be expected to overcrowd those facilities or decrease their performance or safety. The proposed project would not significantly impact or change the design of any existing pedestrian facilities and should not create any new safety problems for pedestrians or bicyclists in the area. The project will add some bicyclists in the area but the volumes added would not be expected to significantly impact any existing bicycle facilities. In relation to the existing conditions, the proposed project would not cause substantial changes to the pedestrian or bicycle traffic in the area and would not

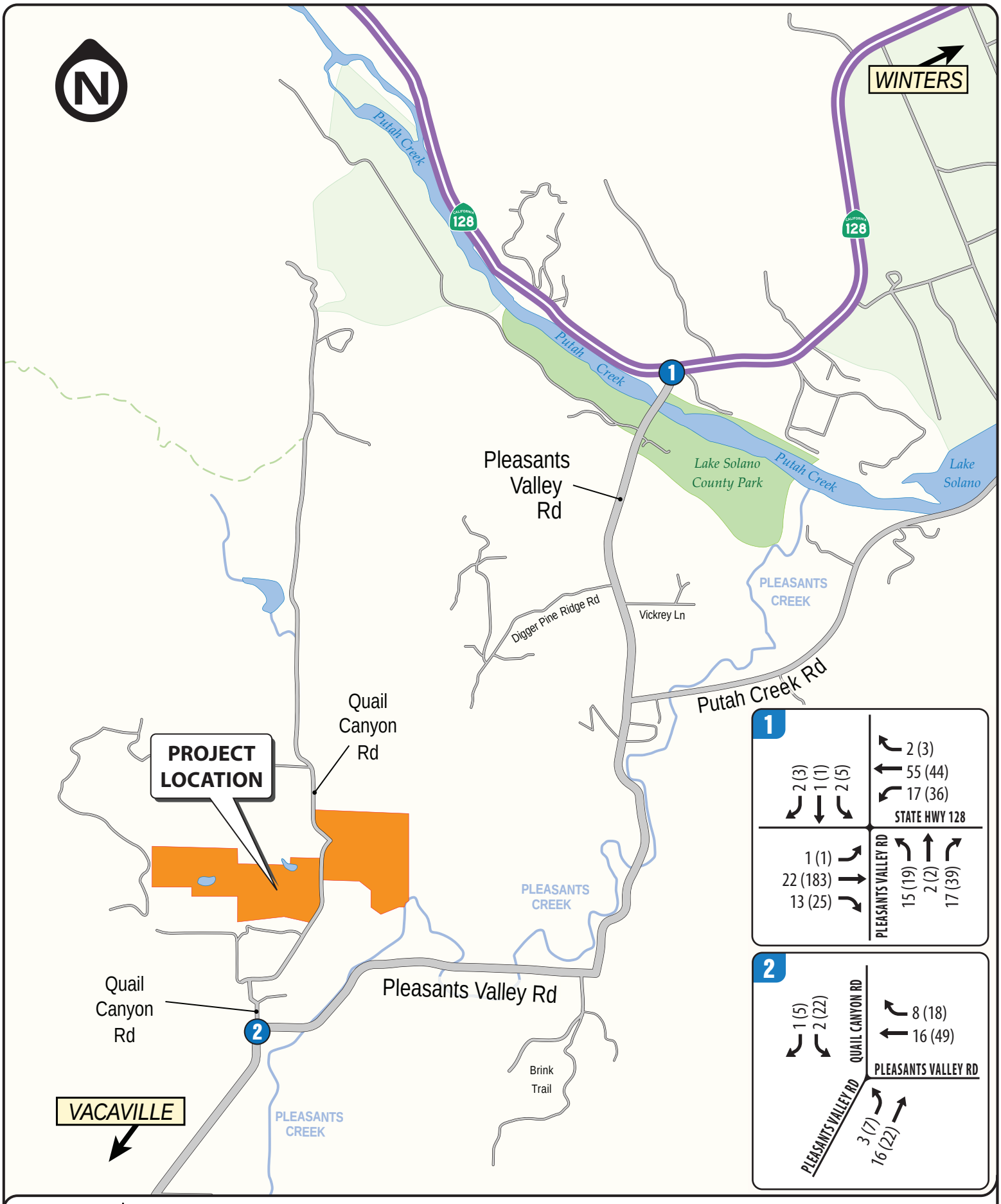

FIGURE 8 | BASELINE PLUS PROJECT AM(PM) PEAK HOUR TRAFFIC VOLUMES

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significantly impact or require changes to the design of any existing bicycle or pedestrian facilities.

5.8 Transit Impacts

The project would not result in degradation of the level of service (or a significant increase in delay) on any roadway segments currently being utilized by bus transit in the area and, as such, no significant impacts to bus transit are expected. The proposed project would not interfere with Soltrans or the Yolo County Transportation District. The project would not impact any existing bus routes and would not remove or relocate any existing bus stops. The proposed project could potentially help support existing bus services with additional transit ridership and would not conflict with any transit plans or goals of Soltrans or the Yolo County Transportation District. As a result, the project would not be expected to result in any significant impacts to bus transit service in the area.

5.9 Cumulative Traffic Capacity Conditions (Scenario 5)

For the cumulative conditions, the intersection traffic volumes were based on the existing turning movements plus incremental growth in background traffic based on the County's traffic model. This would also include buildout of the applicants' other properties for a total of 121 horses for board and care. **Figure 9** presents the cumulative build-out traffic volumes for the project study intersections. **Table 7** summarizes the LOS results for the Cumulative (Year 2040) traffic conditions at each of the project study intersections. As shown on this table, the project study intersections would continue to have acceptable conditions during the AM and PM peak commute hours.

5.10 Cumulative Plus Project Traffic Capacity Conditions (Scenario 6)

Table 7 summarizes the LOS results for the Cumulative Plus Project (Year 2040) traffic conditions at each of the project study intersection. **Figure 10** presents the cumulative build-out traffic volumes including the traffic from the proposed project. As shown on this table, the project study intersections would continue to have acceptable conditions during the weekday AM and PM peak commute hours.

TABLE 7
CUMULATIVE INTERSECTION LEVEL OF SERVICE CONDITIONS

	INTERSECTION	CONTROL	PEAK HOUR	CUMULATIVE		CUMULATIVE PLUS PROJECT	
				Delay	LOS	Delay	LOS
1	STATE HIGHWAY 128 & PLEASANTS VALLEY ROAD	Side Street Stop	AM	9.2	A	9.3	A
			PM	10.7	B	10.8	B
2	PLEASANTS VALLEY ROAD & QUAIL CANYON ROAD	Side Street Stop	AM	8.6	A	8.6	A
			PM	9.0	A	9.1	A

SOURCE: Abrams Associates, 2022. **NOTE:** Delay results are presented in seconds per vehicle.

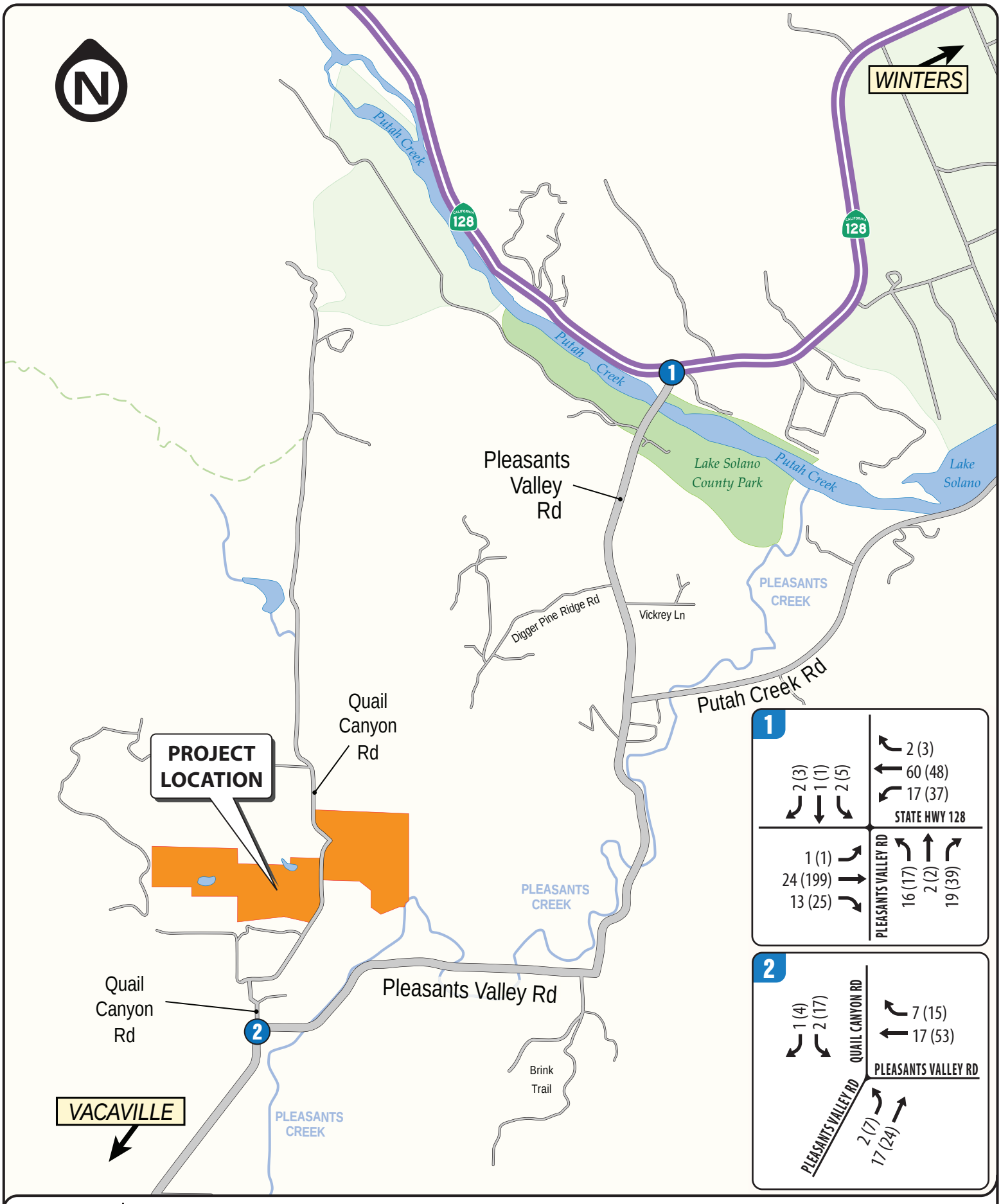

FIGURE 9 | CUMULATIVE AM(PM) PEAK HOUR TRAFFIC VOLUMES

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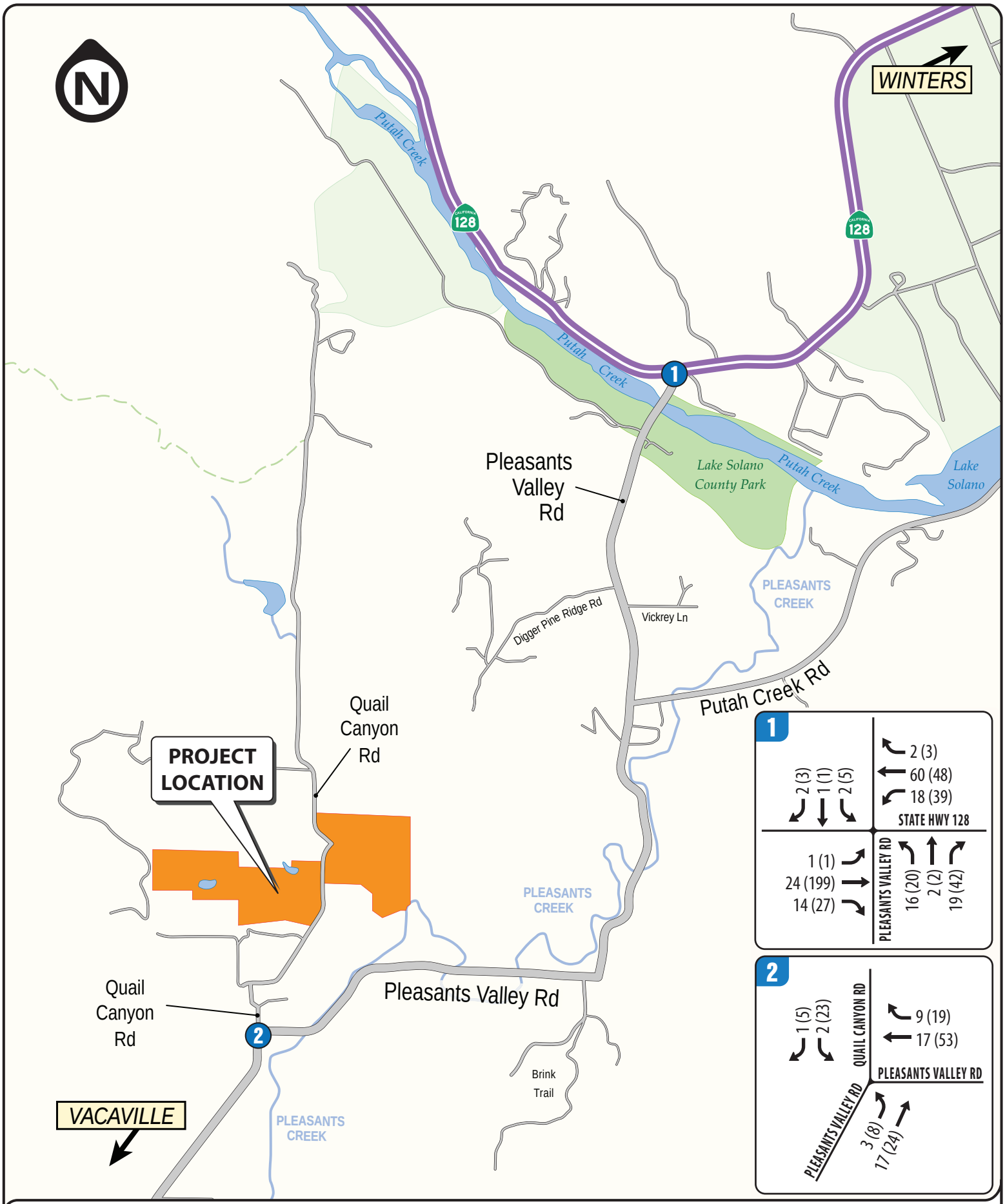

FIGURE 10 | CUMULATIVE PLUS PROJECT AM(PM) PEAK HOUR TRAFFIC VOLUMES

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5.11 Vehicle Miles Traveled

One performance measure that can be used to quantify the transportation impacts of a project is vehicle miles traveled (VMT). This section presents an analysis of the extent of the VMT-related transportation impacts caused by the Project. It should be noted that the County has adopted interim CEQA thresholds for VMT in a memorandum titled "Interim Modification of Standards for the Department of Resource Management Regarding CEQA Considerations for Traffic, Vehicle Miles Travelled, and their Thresholds of Significance".[3] The Project is not located in a Transit Priority Area but, subject to County approval, can be screened out from further VMT analysis because of the limited trip generation from the project and its location in a relatively low VMT generating area.

In Solano County VMT is estimated using an area-wide travel demand model maintained by the Solano Transportation Authority (STA). The model calculates VMT based on the number of vehicles multiplied by the typical distance traveled by each vehicle originating from or driving to a certain area. As with all models, the accuracy of the output depends on the level of detail in the model. The volume of traffic and distance traveled depends on mix of land use types, density, and location as well as the existing and planned transportation system, including availability of public transportation. A travel demand model attempts to properly represent these relationships when forecasting vehicle trips and VMT. The model divides areas within the County into transportation analysis zones, or TAZs, which are used for transportation analysis and other planning purposes. The STA Travel Model includes TAZs that vary in size from a few city blocks in some areas to much larger zones in lower density areas.

VMT is a particularly useful metric for evaluating the impacts of growth on greenhouse gas (GHG) emissions because it can be used to estimate fuel consumption by motor vehicles. Increases in VMT cause proportional increases in greenhouse gas emissions and air pollution. The Office of Planning and Research (OPR) released their final proposed Guidelines in a Technical Advisory on Evaluating Transportation Impacts in CEQA, dated December 2018, which went into effect on July 1, 2020. The guidelines for VMT screening specify the following about small projects: "*Absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a Sustainable Communities Strategy (SCS) or general plan, projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact.* "

The OPR guidance states that "*Projects generating less than 110 daily trips"* would therefore be "*exempt from a VMT analysis*". The guidance also specifies that for a project to be exempt is must generate an average of less than 836 vehicle miles per day. As shown above in **Table 4**, the ITE data indicates the proposed horse stable project would result in a slight increase to the total daily traffic generated by the project (an increase of about 63 trips per day) and would

[3] *Interim Modification of Standards for the Department of Resource Management Regarding CEQA Considerations for Traffic, Vehicle Miles Travelled, and their Thresholds of Significance*, Solano County Department of Resource Management, Fairfield, CA,, June 15, 2021.

generate approximately 478 vehicle trips per day. Therefore, the proposed project could potentially qualify for OPR and the County's screening criteria covering small projects, since it is forecast to generate less than 110 trips per day.

Additional Analysis of VMT - Based on the STA Travel Demand Model the County's average VMT per employee is estimated to be 26.0 miles. The employees of the proposed project would be expected to have similar VMT to existing within the TAZ and in other surrounding TAZ's with similar land uses. The VMT per employee estimated by the STA Travel Model for the project area would therefore be assumed represent the approximate VMT per employee that would be generated by the proposed project as well. The project site is located in TAZ 231. **Table 8** summarizes the existing VMT per employee for the project and provides a comparison to the County average VMT per employee.

TABLE 8
NEAR-TERM PLUS PROJECT VMT RESULTS

Scenario	*Project Average VMT Per Employee*	*VMT Impact Threshold* [1]	*Impact?*
2022 Plus Project	**15.2 miles**	**20.6 miles**	**No**

NOTE: [1] *The existing plus project VMT impact threshold for commercial projects is a VMT per employee that is no higher than 85% of the Countywide average VMT per employee (24.2) which equates to a threshold of 20.6 miles.*

As seen in **Table 1**, the proposed project is forecast to have an average VMT per employee of 15.2 miles. Subject to County approval, the data indicate the project would be considered to have a less than significant impact. The project land use (horse stables) would not alter the existing built environment in such a way as to increase the rate or length of vehicle trips. In general, the proposed project has been found to be consistent with existing land uses in the area and would be expected to contribute VMT consistent with existing land uses in the area. The project would not be expected significantly alter travel patterns in the area.

It is our understanding the project is also consistent with the Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS). Therefore, subject to County approval, the project generated VMT would be considered to be below the established VMT thresholds and the project would therefore have a less than significant impact on the VMT in the area.

5.12 Impacts and Mitigation Measures

Based on the project's design and a detailed analysis conducted according to the required guidelines there would be no significant transportation impacts according to established traffic engineering standards and no off-site traffic or transportation mitigations would be required.

Impact #1 Impacts related to conflicts with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or potential decreases to the performance or safety of such facilities.

The project would not result in degradation of the level of service (or a significant increase in delay) on any roadway segments currently being utilized by bus transit in the area and would not increase ridership beyond existing capacity. As such, no significant impacts to bus transit will occur. In addition, the proposed project would not significantly impact or change the design of any existing pedestrian facilities and would not create any new safety problems for pedestrians in the area. The project will add some bicyclists in the area but the volumes added would not be expected to significantly impact any existing bicycle facilities. In relation to the existing conditions, the proposed project would not cause substantial changes to the pedestrian or bicycle traffic in the area and would not significantly impact or require changes to the design of any existing bicycle or pedestrian facilities.

Mitigation Measure(s)
None required.

Impact #2 Impacts relating to construction activities

The increase in traffic as a result of construction activities associated with the proposed project has been quantified assuming a worst-case single phase construction period of 6 months.

Heavy Equipment

Approximately ten pieces of heavy equipment are estimated to be transported on and off the site each month throughout the demolition and construction of the proposed project. Heavy equipment transport to and from the site could cause traffic impacts in the vicinity of the project site during construction. However, each load would be required to obtain all necessary permits, which would include conditions. Prior to issuance of grading and building permits, the project applicant would be required to submit a Traffic Control Plan. The requirements within the Traffic Control Plan include, but are not limited to, the following: truck drivers would be notified of and required to use the most direct route between the site and the freeway, as determined by the County Engineering Department; all site ingress and

egress would occur only at the main driveways to the project site and construction activities may require installation of temporary (or ultimate) traffic signals as determined by the County Engineer; specifically designated travel routes for large vehicles would be monitored and controlled by flaggers for large construction vehicle ingress and egress; any debris and mud on nearby streets caused by trucks would be monitored daily and may require instituting a street cleaning program. In addition, the transport of heavy equipment being hauled to and from the site each month would be short-term and temporary.

Employees

The weekday work is expected to begin around 7:00 AM and end around 4:00 PM. The construction worker arrival peak would occur between 6:30 AM and 7:30 AM, and the departure peak would occur between 4:00 PM and 5:00 PM. These peak hours are slightly before the countywide commute peaks. It should be noted that the number of trips generated during construction would not only be temporary, but would also be substantially less than the proposed project at buildout. Based on past construction of similar projects, construction workers could require parking for up to 30 vehicles during the peak construction period. Additionally, deliveries, visits, and other activities may generate peak non-worker parking demand of 5 to 10 trucks and automobiles per day. Therefore, up to 40 vehicle parking spaces may be required during the peak construction period for the construction employees and deliveries. Furthermore, the Traffic Control Plan requires construction employee parking be provided on the project site to eliminate conflicts with nearby residential areas. Because the construction of the project can be staggered so that employee parking demand is met by using on-site parking, the impacts of construction-related employee traffic and parking are considered less-than-significant.

Construction Material Import/Export

The project would also require removal of existing debris as well as the importation of construction material, including raw materials for the building pads, the buildings, and landscaping. During the maximum peak construction period, the project could generate approximately 4 heavy truck trips per day. Furthermore, under the provisions of the Traffic Control Plan, if importation and exportation of material becomes a traffic nuisance, then the County Engineer may limit the hours the activities can take place.

Traffic Control Plan

The Traffic Control Plan would indicate how parking for construction workers would be provided during construction and ensure a safe flow of traffic in the project area during construction. This analysis assumed construction of the entire project in one phase to identify the potential worst-case traffic effects. If the project is built in

phases over time, the effects of each phase will be the same or less. Each phase will be subject to a Traffic Control Plan and oversight by the County Engineer. The last phase may require added worker parking measures, depending on the circumstances, as there will not be any remaining vacant land for parking. Therefore, the demolition and construction activities associated with the proposed project or its individual phases would not lead to noticeable congestion in the vicinity of the site or the perception of decreased traffic safety resulting in a ***less-than-significant*** impact.

Mitigation Measure(s)
None required.

Impact #3 Impacts related to site access and circulation.

All access to the site is proposed to occur via driveways onto Quail Canyon Road. All of the existing intersections providing access to the project are forecast to have acceptable operations under all project analysis scenarios. Based on a review of the proposed site plan it was determined that the site circulation should function well and would not cause any safety or operational problems. The project site design has been required to conform to County design standards and is not expected to create any significant impacts to pedestrians, bicyclists or traffic operations. Therefore, impacts related to access and circulation to the proposed project would be ***less-than-significant*** with implementation of the following mitigation measure.

Mitigation Measure(s)
Installation of pedestrian and bicycle safety improvements in coordination with the Public Works Department.

Impact #4 Impacts regarding emergency vehicle access on and surrounding the proposed project site.

Sufficient emergency access is determined by factors such as number of access points, roadway width, and proximity to fire stations. The land use plan for the proposed project would include entrances on Quail Canyon Road. All lane widths within the project would meet the minimum width that can accommodate an emergency vehicle; therefore, the width of the internal roadways would be adequate. In addition, with the proposed mitigations the addition of traffic from project traffic would not result in any significant changes to emergency vehicle response times in the area. Therefore, subject to approval from the County and the fire department, the development of the proposed project is expected to have ***less-than-significant*** impacts regarding emergency vehicle access.

Mitigation Measure(s)
None required.