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Ms. Laurel L. Impett, AICP
Shute, Mihaly & Weinberger LLP
396 Hayes Street
San Francisco, California 94102

Subject: ***Review of Transportation and Circulation Analysis
Village at Squaw Valley Specific Plan Draft Environmental Impact Report***

Dear Ms. Impett:

As requested, MRO Engineers, Inc., has completed a review of the "Transportation and Circulation" analysis completed with respect to the proposed Village at Squaw Valley Specific Plan in Placer County, California. The proposed project is the subject of a Draft Environmental Impact Report (DEIR), which was prepared by Ascent Environmental, Inc., for the Placer County Planning Services Division in May 2015. The DEIR incorporates a traffic impact analysis completed by Fehr & Peers.

This letter report documents the results of our detailed review of the Transportation and Circulation analysis presented in the DEIR.

PROJECT DESCRIPTION

The proposed Village at Squaw Valley Specific Plan project would be located on a 94-acre site within the larger Squaw Valley area. A mixed-use development is proposed, which would include the following components (Ref.: DEIR, p. 2-3):

- Main Village Area
 - Resort Residential: Up to 1,493 bedrooms within 850 residential units.
 - Commercial: 297,733 square feet (SF) of tourist-serving space, including hotel common areas, conference rooms, retail, restaurants, etc.; about 91,522 SF would be removed.
 - Mountain Adventure Camp (MAC): 90,000 SF recreation facility with indoor/outdoor pool system, water slides, indoor rock climbing, 300-seat movie theater, 30-lane bowling alley, and multi-generational arcade.
 - Parking: 3,297 parking spaces, with up to 1,800 additional spaces in podium parking under new buildings.
- East Parcel
 - Employee Housing and Recreational Facilities: 50 employee housing units accommodating 300 employees.
 - Commercial Space: 20,000 SF, including a 15,000 SF shipping and receiving facility and a 5,000 SF market.

REVIEW OF TRANSPORTATION AND CIRCULATION ANALYSIS

The traffic and transportation system impacts associated with the Village at Squaw Valley Specific Plan project are addressed in Chapter 9 – Transportation and Circulation of the DEIR. Our review of that analysis revealed several issues that must be addressed prior to approval by Placer County of the proposed project and its environmental documentation. These issues are presented below.

1. ***Incomplete Set of Daily Traffic Analysis Scenarios*** – DEIR Table 9-18 (p. 9-38) presents an estimate of the volume of project-generated traffic on a daily basis for a Saturday in the winter season. That estimate is 2,821 vehicles per day (VPD). Although the DEIR Transportation and Circulation section presents no comparable daily traffic estimate for summer conditions, examination of the DEIR Air Quality section reveals this information.

Specifically, DEIR p. 10-15 says:

Upon full buildout of the Specific Plan . . . the project would generate up to 2,821 trips per day . . . during the peak day of the winter season and up to 8,410 trips per day . . . during the peak summer season day.

In other words, the proposed project would generate three times more daily traffic in the summer than in the winter.

However, DEIR p. 9-3 says:

. . . summer daily conditions are not analyzed because the winter daily volume is much higher.

Obviously, this statement is erroneous, given the daily traffic volume estimates presented above. As such, the DEIR traffic analysis must be revised to incorporate an analysis of traffic operations in the study area under summer daily conditions.

Even in the unlikely event that the combined total of background/ambient traffic and project-generated traffic is lower in the summer than in the winter, the addition of over 8,400 daily vehicles to the local road system (with all of them on Squaw Valley Road) will adversely impact traffic operations and the quality of life of nearby residents, as illustrated below.

- Referring to DEIR Table 9-7 (p. 9-13), the capacity of Squaw Valley Road west of Squaw Creek Road is shown to be 15,000 VPD. The project's summer trip generation represents 56 percent of this total. In other words, over half of the total capacity of Squaw Valley Road will be consumed by project-related traffic. Assuming for illustrative purposes that the existing summer traffic volume on this road segment is equal to the winter volume (as shown on DEIR Table 9-11, p. 9-17), addition of the project traffic would increase the daily traffic volume from 12,900 VPD to 21,310 VPD. The volume/capacity (V/C) ratio would increase from 0.86 (LOS D) to 1.42 (LOS F). This would represent a significant impact, as the DEIR significance criteria require operation of this road segment at LOS C or better.
- On Squaw Valley Road west of State Route 89, the daily traffic volume would increase from 12,600 VPD to 21,010 VPD, with a corresponding increase in V/C ratio from 0.56 (LOS A) to 0.93 (LOS E). This would also represent a significant impact, as the DEIR significance criteria require operation of this road segment, which is within ½-mile of SR 89, at LOS D or better.

The failure to consider summer traffic operations on a daily basis is a significant deficiency in the DEIR, which can only be remedied by modifying the traffic analysis and recirculating the DEIR for further public review.

2. ***Incomplete Set of Peak-Hour Traffic Analysis Scenarios*** – The traffic impact analysis addressed conditions in the following three peak-hour scenarios:

- Winter Saturday AM Peak Hour,
- Winter Sunday PM Peak Hour, and
- Summer Friday PM Peak Hour.

With regard to the first of those scenarios, the DEIR states (p. 9-4):

The winter a.m. peak hour analysis represents conditions on a Saturday morning when the most skiers use the mountain.

This statement illuminates a deficiency in the traffic analysis, as the fact that the most skiers are using the mountain means that they are already at Squaw Valley; they are not travelling to Squaw Valley. Consequently, rather than evaluating conditions representing travel by patrons of the proposed project, this scenario primarily reflects traffic flow associated with day-use skiers. In that regard, we note that the DEIR says (p. 9-37):

The proposed project would not be expected to affect the number of day-use skiers . . .

Consequently, the analysis of the winter Saturday AM peak hour is of little value in determining the environmental impacts of the proposed project.

The DEIR Transportation and Circulation section presents a fairly detailed description regarding the selection of the specific hours to be analyzed. However, there is no indication that the process employed in establishing the specific study periods considered the appropriate day of the week to be analyzed.

In this regard, the traffic analysis is somewhat contradictory, in that the winter analyses addressed Saturday and Sunday conditions, while the summer analysis treated the Friday PM peak hour as the critical analysis time period. The DEIR supports consideration of the summer Friday PM peak hour, as follows (DEIR, p. 9-3):

For this DEIR, the summer condition represents a Friday afternoon peak hour in August . . . Friday afternoon conditions typically represent peak conditions resulting from various recreational activities and overnight visitor travel to seasonal residences, rentals, or other lodging accommodations.

We can't help but wonder: If Friday afternoon is the peak time in the summer, why not in the winter, when all of the same conditions regarding recreational activities (e.g., skiing) and overnight visitor travel (such as the proposed project) apply?

The need for an analysis of the winter Friday PM peak hour is further supported by a cursory examination of the project trip generation estimates documented in the DEIR Transportation and Circulation section. Although the peak-hour trip generation estimates for winter and summer conditions are presented separately in the DEIR (Winter: Table 9-18, p. 9-38 and Summer: Table 9-19, p. 9-43), for convenience in comparing the numbers, we have combined them into Table 1.

TABLE 1
Trip Generation Comparison

Land Use	Size	Winter ¹						Summer		
		Saturday AM Peak Hour			Sunday PM Peak Hour			Friday PM Peak Hour ²		
		In	Out	Total	In	Out	Total	In	Out	Total
Hotel/Condo/Fractional Cabin Units (Guest/Deliveries/Retail/Restaurant)	1,286 units after lock- offs	58	50	108	38	98	136	240	236	476
Hotel/Condo/Fractional Cabin Units (Employees)		29	5	34	2	54	56	26	77	103
TOTAL TRIPS		87	55	142	40	152	192	266	313	579
TRIP GENERATION RATE (Trips/Unit)		0.068	0.043	0.111	0.031	0.118	0.149	0.207	0.243	0.456
Notes:										
¹ Source: DEIR, Table 9-18, p. 9-38.										
² Source: DEIR Table 9-19, p. 9-43.										

For simplicity, we have used the format employed in DEIR Table 9-19, which combines the various lodging categories into a single class while distinguishing between guest and employee trips. Note also that, because the summer trip generation estimate for the lodging facilities also reflected the on-site retail and restaurant space, we have included those land uses in the values presented in Table 1, so as to provide comparable numbers. Table 1 excludes the Mountain Adventure Camp (which is shown to generate very few trips) and the East Parcel land uses.

As shown, in the summer Friday PM peak hour, the proposed project is estimated to generate over four times as much traffic as in the winter Saturday AM peak hour. Compared to the winter Sunday PM peak hour, the summer Friday PM peak hour represents over three times as much project-generated traffic.

Given the fact that Squaw Valley is known the world over as a ski resort, it is difficult to understand why the greatest volume of project traffic would occur in the summer, and by a sizable margin. Although we recognize that one of the project objectives relates to development of a “year-round, destination resort,” another objective is to provide a resort that is, “on par with peer world class North American ski destinations.” It seems that the traffic impact analysis has substantially underestimated the volume of winter peak-hour traffic.

While the three peak-hour scenarios presented in the DEIR may contribute to a limited understanding of the traffic impacts associated with the proposed project, those impacts will not be fully revealed and understood until an analysis scenario addressing conditions during the winter Friday PM peak hour is completed and distributed for public review.

Furthermore, given the substantial volume of project traffic estimated to occur in the summer Friday PM peak hour (which reflects the time when weekend guests will arrive at Squaw Valley), it seems logical to address the key time period when those guests will depart the proposed project. Specifically, the DEIR should also evaluate traffic operations during the summer Sunday PM peak hour.

3. ***Incorrect Trip Generation Estimate*** – The trip generation estimate for the proposed project contains several questionable elements.
 - For the East Parcel retail land use (5,000 SF), the volume of traffic for summer Friday PM peak-hour conditions (DEIR Table 9-19, p. 9-43) was appropriately estimated using information presented in the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (Ninth Edition, 2012). However, the estimate is based on applying the average trip rate for a shopping center. This is wrong for several reasons.
 - First, because of the typical trip generation pattern for shopping centers (i.e., the bigger they get, the fewer trips they generate per 1,000 SF), the average trip generation rate provided in the ITE *Trip Generation Manual* is never used by knowledgeable professionals. Instead, the logarithmic formula is typically used. DEIR Table 9-19 (p. 9-43) shows that the East Parcel retail would generate 19 total trips in the Friday PM peak hour, based on the average ITE rate (as applied in the DEIR). Correctly applying the logarithmic formula indicates it would generate 80 trips, over four times more.
 - Second, perhaps more importantly, the 5,000 SF retail store is not a shopping center; it’s a convenience market. Specifically, DEIR p. 9-39 says, “. . . it would serve local, convenience shopping needs of project employees who reside in the East Parcel” and,

further, “. . . would also attract ‘pass-by’ trips from Squaw Valley Road.” In contrast, according to the *ITE Trip Generation Manual*:

A shopping center is an integrated group of commercial establishments that is planned, developed, owned and managed as a unit. [Emphasis added]

Further, in the *ITE Trip Generation Manual*, the average size of the surveyed shopping centers is 376,000 SF (i.e., 75 times bigger than the East Parcel retail), while the average size of convenience markets is 3,000 SF, which is comparable to the East Parcel store.

- Third, because it’s a convenience market and not a shopping center, the correct trip rate to apply is for convenience markets. The *ITE Trip Generation Manual* has two categories of these markets – one for stores open 24 hours and one for stores open 15 – 16 hours.
 - For a 24-hour convenience market, the PM peak-hour trip rate is 52.41 trips/1,000 SF, which would result in an estimated total of 262 PM peak-hour trips (instead of 19).
 - For a 15 – 16-hour store, the trip generation rate is 34.57 trips/1,000 SF. Applying that rate would indicate that the East Parcel retail would generate 173 PM peak-hour trips.
 - Based on information provided in the *ITE Trip Generation Handbook* (Third Edition, August 2014), about half of the convenience market trips would be pass-by trips (i.e., trips associated with vehicles that are already on the adjacent road), compared to 34 percent for a shopping center. Applying the pertinent percentages to the retail trip estimates reveals the following net trip generation values:
 - Shopping center average rate: 19 trips minus 34 percent pass-by = 13 net trips
 - Shopping center logarithmic formula: 80 trips minus 34 percent pass-by = 53 net trips
 - 24-hour convenience market: 262 trips minus 51 percent pass-by = 128 net trips
 - 15 – 16-hour convenience market: 173 trips minus 51 percent pass-by = 85 trips

When the East Parcel retail is appropriately treated as a convenience market, it is found to generate at least 6.5 times as much traffic as the DEIR indicates. This difference is clearly substantial.

- There is no description of the basis for the number of trips estimated for the “Miscellaneous” land use category in DEIR Table 9-18 (p. 9-38). According to the applicable footnote in the table, this land use category includes “delivery trucks, emergency/utility service vehicles, transit, taxi, and other (e.g., pick-up/drop-offs) trips.” On a daily basis, the table indicates there will be 100 miscellaneous trips (50 inbound and 50 outbound), while in the two peak-hour periods, there will be 20 trips in the Saturday AM (10 in and 10 out) and in the Sunday PM, there will be 15 trips (5 in and 10 out). Given the lack of documentation and the “roundness” of the numbers, it is difficult to escape the conclusion that the estimates were simply fabricated from thin air.

- The condo hotel and fractional cabin trip generation estimates were based partly on the guest parking supply (i.e., 0.75 guest parking spaces per 1-bedroom unit, 1.0 guest parking space per 2-bedroom unit, and 1.25 guest parking spaces per 3-bedroom unit, as presented in the parking analysis in DEIR Appendix G). Derivation of a trip generation estimate based on the proposed parking supply is contrary to standard practice in the traffic engineering profession. There is simply no connection between the number of parking spaces and the volume of traffic generated in any peak-hour period. To be valid, the trip generation estimate must be based on the size of the actual “generator,” which in this case is the number of lodging units.

Moreover, if the proposed parking supply is inadequate, the project’s trip generation will be under-estimated. Of particular concern in this case is the proposal to provide only 0.75 parking spaces per 1-bedroom unit at a development where surveys show that 82 - 86 percent of the visitors and guests arrive by auto. (Ref.: DEIR Tables 9-12 through 9-15, pp. 9-18 through 9-21) According to the trip generation tables presented in DEIR Appendix G, 1,118 of the 1,255 condo hotel units (i.e., 89 percent) will be 1-bedroom units. Thus, inadequate parking will be provided due to allocation of less than one parking space per unit to almost 90 percent of the lodging development. (See comment 10 below.)

In addition to the fact that guests will be left scrambling to find a place to park their vehicles, the volume of project-generated traffic has been under-estimated by 20 – 25 percent.

- DEIR p. 9-37 says, “[t]he proposed project would not be expected to affect the number of day-use skiers, or any of their travel behaviors . . .” The validity of this statement is clearly questionable. As noted above, one of the project objectives is to provide a resort that is, “on par with peer world class North American ski destinations.” Achieving this objective will certainly result in substantial growth in day-skier demand. Moreover, it seems obvious that part of the reason for building 29,530 SF of restaurants, 27,700 SF of retail, and the 90,000 SF “Mountain Adventure Camp” is to attract more day-use skiers from other ski areas. The project trip generation estimate must reflect this likelihood.
 - In fact, it’s reasonable to expect that the Mountain Adventure Camp, with its extensive and challenging recreational opportunities will become an attraction in its own right. Despite this, DEIR Table 9-18 indicates that the MAC will generate a grand total of 58 guest trips over the course of an entire Saturday, with 4 guest trips in the Saturday AM peak hour and 6 guest trips in the Sunday PM peak hour. Again, the project trip generation estimate must be revised to include a more realistic assessment of the magnitude of this attraction.
4. ***Failure to Analyze Project Impacts on the Interstate 80 Freeway*** – The DEIR presents an in-depth analysis of traffic operations on SR 89 and Squaw Valley Road. However, no consideration is given to the potential impacts of the proposed project on Interstate 80 (I-80), which will serve a substantial portion of the project-generated traffic.

Among the intersections included in the analysis are SR 89/I-80 Westbound Ramps and SR 89/I-80 Eastbound Ramps. DEIR Exhibit 9-10 (p. 9-51) illustrates the “Project-Only Trips.” Review of that figure reveals that a total of 152 PM peak-hour project-generated trips were assigned to/from the west on I-80 on a summer Friday. Those 152 trips represent 25 percent of the total project trip generation in the summer Friday PM peak hour. In that same summer Friday PM peak-hour period, 96 project-related trips (17 percent of the project-generated total) were assigned to/from the east on I-80.

Despite the fact that I-80 was projected to carry a substantial portion of the traffic generated by the proposed project, no analysis was conducted to assess potential project-related traffic impacts at the I-80/SR 89 on- or off-ramps or the merge/diverge points where those ramps meet the freeway mainline. Further, no analysis of project-related impacts on the I-80 mainline was performed. Consequently, it is impossible to determine whether the proposed project will adversely impact traffic operations on the freeway or its ramps. To ensure a thorough analysis of potential traffic impacts, it is essential that these analyses be performed and documented in a revised DEIR.

5. ***Inadequate Documentation of Vehicle Miles Traveled (VMT) Estimate*** – Certain of the analyses documented in the DEIR Air Quality section (Chapter 10) are based upon, “. . . an estimate of project-generated vehicle trips and VMT developed as part of the analysis presented in Chapter 9. ‘Transportation and Circulation’ (Fehr & Peers 2014) . . .” (DEIR p. 10-12) Further, “[t]he VMT was calculated by Fehr & Peers, the traffic consultant that prepared the EIR’s Transportation and Circulation (Chapter 9) analysis.” (DEIR p. 10-12)

Similar references are found in DEIR Chapter 16, Greenhouse Gases and Climate Change.

Careful review of the Transportation and Circulation analysis presented in DEIR Chapter 9 reveals no mention of VMT and certainly no documentation of the assumptions and procedures employed in developing any VMT estimates. In fact, a digital search of the chapter reveals only a single reference to VMT or vehicle miles traveled; that reference occurs in the description of the Lake Tahoe Regional Plan and bears no relationship to the specific travel characteristics of the proposed project.

In any event, the project’s VMT estimates are presented on DEIR p. 10-15, as follows:

Upon full buildout of the Specific Plan . . . the project would generate up to 2,821 trips per day and 85,398 VMT in Placer County and/or the MCAB [Mountain Counties Air Basin] during the peak day of the winter season and up to 8,410 trips per day and 172,168 VMT in Placer County and/or the MCAB during the peak summer season day. (According to the analysis presented in Chapter 9, ‘Transportation and Circulation,’ another 86,912 VMT would be generated by the project on a peak summer day that would occur outside of this area but this portion of VMT would be split among areas of Nevada, El Dorado County, and counties in the Sacramento and Bay Area regions [Fehr & Peers, 2014].

First, we note that these VMT estimates are inaccurate because of the deficiencies in the trip generation estimates described above. Correcting the trip generation errors will result in higher VMT values.

In addition, the VMT estimates are difficult to comprehend, particularly with respect to the summer estimate, for which “. . . another 86,912 VMT would be generated by the project on a peak summer day that would occur outside of this area . . .” The meaning of this statement is unclear, to say the least. Do these trips never enter the study area in the immediate vicinity of the proposed project? If so, what is the nature of the trips? Why do such trips only occur in the summer?

The derivation of the VMT values must be explained in greater detail to clarify exactly how the estimates were derived.

6. **Questionable Average Trip Length Estimate** – The VMT estimates described above in combination with the project trip generation estimates can be used to derive an average trip length for the proposed project. Using the VMT and daily trip generation figures, the following average trip lengths result:

- Peak winter day: Average trip length = 30.3 miles (i.e., 85,398 VMT / 2,821 daily trips)
- Peak summer day: Average trip length = 31.1 miles (i.e., (172,168 VMT + 89,612 additional VMT) / 8,410 daily trips)

However, these average trip lengths may not be reasonable. The Squaw Valley travel surveys documented in the DEIR show the following trip origins for summer and winter overnight guests; the same percentages apply to both seasons (Ref.: Table 9-12, p. 9-18 for winter overnight guests and Table 9-15, p. 9-21 for summer overnight guests):

- Bay Area: 38 percent,
- Sacramento/Central Valley: 13 percent, and
- Reno/Sparks: 10 percent.

Thus, these three locations account for 61 percent of the guests at Squaw Valley.

According to Yahoo! Maps, the average travel distance to Squaw Valley from each of these trip origins is as follows:

- Bay Area: 195 miles (from San Francisco),
- Sacramento/Central Valley: 109 miles (from Sacramento, which is conservative since most Central Valley origins would be substantially farther from Squaw Valley), and
- Reno/Sparks: 44 miles (from Reno).

Based on these values, the weighted average trip length for guests coming from these three locations is over 92 miles. Although it is possible that the combination of guest trips with the other types of trips might result in an overall average trip length of about 30 miles, it is impossible to be sure of this, given the limited information provided in the DEIR.

Because this information is critical to the analysis of project-related air quality and greenhouse gas emissions impacts, the VMT estimate must be explained in greater detail, so the public can be assured of its validity.

7. **Specific Plan Policies Ensure Future Traffic Congestion** – As presented on DEIR p. 9-33, Specific Plan Policy CP-1 states that:

During peak periods, LOS F is acceptable within the Plan Area . . .

Although we recognize that Placer County allows such a policy to be adopted within a specific plan area, we believe it bears noting that this policy will ensure the presence of substantial traffic congestion in the vicinity of Squaw Valley and could even result in the creation of hazardous conditions. This would become a particular issue in the event that Squaw Valley proposes a future expansion.

First, it should be noted that LOS F is defined as the worst possible roadway system operation. It represents a condition under which traffic demand exceeds the capacity of the roadway facility. For traffic signal-controlled intersections, LOS F means that the average driver was delayed for over 80 seconds. At a stop sign, a driver would be delayed for over 50 seconds.

Under this policy, no matter how much congestion exists or how long delays might become at local intersections, traffic operations will still be defined to be at LOS F, as there is no lower level of service category. Consequently, for any future analysis of traffic operations, even if local intersections or roadway segments are found to operate at LOS F, the addition of traffic associated with a proposed project will still result in LOS F; it will be impossible to have a significant traffic impact.

Considering LOS F operation to be acceptable will have safety impacts, as well. For example, intersection delays such as those described above typically result in extensive queues of vehicles waiting to pass through an intersection. Such queues can be a serious impediment to the flow of emergency vehicles. Delays to ambulances or police or fire vehicles can obviously have life or death consequences. This is a particular concern in rural or mountainous areas, such as Squaw Valley, where the road system is constrained by topography and few (if any) alternative emergency access routes are available.

In addition, implementation of this policy will almost certainly result in adverse impacts in the form of air quality and greenhouse gas emission deficiencies.

8. **Emergency Vehicle Access** – The DEIR contains an extensive discussion of emergency access issues within the Specific Plan area. However, the project-related impacts on off-site emergency vehicle response are virtually ignored.

Squaw Valley Road and State Route 89 are the only roadways by which emergency vehicles could approach or depart the proposed project. What will be the effect on emergency vehicle response time when Squaw Valley Road between Squaw Creek Road and the village area operates at LOS F under Existing Plus Project conditions (DEIR Table 9-20, p. 9-49)? Or when queues in the two eastbound lanes on Squaw Valley Road at SR 89 reach 800 – 825 feet under those same conditions (DEIR Table 9-22, p. 9-62)? Or when most segments of SR 89 operate at LOS E (i.e., virtually at capacity), also under Existing Plus Project conditions (DEIR Table 9-23, p. 9-64)?

DEIR Appendix J presents a “Wildland Fire Evacuation Plan.” The plan provides valuable information to assist residents in being prepared to evacuate in the event of a wildfire. It instructs residents to take Squaw Valley Road to SR 89, then to either Truckee or Tahoe City, whichever is away from the fire. Unfortunately, the plan seems to reflect no quantitative analysis with respect to whether adequate capacity exists on those roads to accommodate the crush of traffic that will occur during an evacuation. Further, there is no indication of the incremental impacts of the added traffic resulting from construction of the proposed project.

On a “typical” day, the added delays caused by the proposed project’s traffic would be inconvenient. On a day when a wildfire threatens, the effects of the additional traffic could be dire.

9. **Deficient Mitigation Measures** – The DEIR presents a number of mitigation measures aimed at offsetting the significant impacts identified in the Transportation and Circulation section.

- Mitigation Measure 9-1a (DEIR p. 9-56) calls for development of a “predictive model” to identify days when the various traffic management procedures will be needed. Specifically, the model is intended to identify days when Squaw Valley Road will exceed a traffic volume of 13,500 VPD. But DEIR p. 9-8 accurately says, “Peak attendance days can be difficult to forecast . . .” This calls into question the feasibility of the mitigation measure. At their very best, travel demand forecasting models are imprecise tools. The output from such a model is typically rounded off severely and, even then, there’s limited expectation that the predicted values will be accurate. In short, there is little assurance that the required “predictive model” will be effective in accurately determining the need for traffic management activities.
 - We also note that there seems to be an expectation that Mitigation Measure 9-1a will only apply on “ski days.” However, given the project objective regarding development of a year-round destination resort, assurance should be provided that the traffic management plan will be implemented any time the 13,500 ADT threshold will be exceeded, regardless of time of year.
 - Mitigation Measure 9-2a (DEIR, p. 9-58) calls for restricting northbound Far East Road to right-turns only at Squaw Valley Road during the PM peak hour (on peak days only). What if drivers need to go left? There is no discussion of mitigation-related impacts.
 - Mitigation Measure 9-2a also says, “Information provided by the project applicant team suggests the configuration may already be in existence when traffic management is implemented.” If it already exists, it’s not project-related mitigation. The DEIR should identify another feasible mitigation measure to offset this significant impact.
 - Mitigation Measures 9-2b, 9-2c, and 9-2d (DEIR, p. 9-58) all call for stopping traffic on Squaw Valley Road to allow vehicles on side streets to turn onto Squaw Valley Road, but provide no information regarding the impacts to Squaw Valley Road traffic (i.e., delays and queues). The adverse impacts associated with implementing these measures must be revealed.
 - Mitigation Measure 9-4 (DEIR, p. 9-61) calls for providing substantially more signal time for northbound left turns at SR 89/Squaw Valley Road, in order to reduce the length of the left-turn queue. The added signal time would come out of the time currently allocated to the southbound thru and right-turn movements. No information is provided regarding the effects on southbound traffic (especially with regard to delays and queues). Again, the adverse impacts associated with implementing this measure must be revealed.
10. **Inadequate Parking Supply** – The DEIR Transportation and Circulation section incorporates the results of a parking analysis completed by LSC Transportation Consultants (*Village At Squaw Valley Parking Analysis*, September 22, 2014), which is presented within DEIR Appendix G. According to that report (p. 3):

The analysis of condominium hotel parking is based on the rate of 0.75 spaces per 1 bedroom unit for guests.

This parking ratio is strictly an assumption, and is not based on any analysis of actual parking conditions at Squaw Valley. The LSC report attempts to justify the adequacy of this parking ratio through the conduct of a literature review and by referring to the parking ratios that apply at other locations. The other locations referred to in the analysis had a wide range of parking ratios, from as low as 0.86 spaces per unit to as high as 1.66 spaces per unit. The composition of

the study locations apparently also varied greatly, in terms of the numbers of bedrooms per unit. (The specific composition of the other locations is not always specified.)

To be fair, we note that the parking ratios at the locations referred to above include both guest and employee parking needs, while the assumed ratio of 0.75 space per unit relates only to guest parking requirements. However, the LSC parking analysis specifies an employee parking requirement of only 0.11 space per unit at Squaw Valley. This value is based on surveys of existing Squaw Valley USA employees, so it reflects the actual travel characteristics (in terms of travel mode (auto or other), vehicle occupancy, and whether they live in the Squaw Valley employee housing) of those individuals. Applying that employee parking factor to the results of the literature review suggests guest parking ratios as high as 1.55 spaces per unit.

The parking study concludes:

Based on this review, a guest parking rate for the proposed project is 0.75 space per one-bedroom unit plus 0.25 space per bedroom over one bedroom, for a total of 1.00 guest spaces per two-bedroom unit and 1.25 per three-bedroom unit.

The justification for these recommended ratios seems particularly flimsy when viewed in the light of the travel surveys conducted by Squaw Valley, which are documented in DEIR Tables 9-12 through 9-15 (pp. 9-18 through 9-21). Those tables identify the travel characteristics of Squaw Valley guests, including their travel mode. Key findings revealed on the tables are as follows:

- Table 9-12 – Travel Characteristics of Skiers/Boarders and Winter Overnight Guests at Squaw Valley
 - Skiers/Boarders: Auto = 82 percent
 - Overnight Guests: Auto = 82 percent
 - Overnight Guests: Airplane & Rental Car = 18 percent
- Table 9-13 - Travel Characteristics of Village at Squaw Valley Winter Visitors and Employees
 - Visitors: Auto = 85 percent
 - Employees: Auto = 82 percent
- Table 9-14 - Travel Characteristics of Village at Squaw Valley Summer Visitors and Employees
 - Visitors: Auto = 86 percent
 - Employees: Auto = 82 percent
- Table 9-15 - Travel Characteristics of Summer Overnight Guests
 - Auto = 85 percent
 - Airplane & Rental Car/Shuttle = 15 percent

According to Squaw Valley's own surveys, between 82 and 86 percent of guests at Squaw Valley arrive by auto. Further, according to the survey results presented in Table 9-12, an additional 18 percent of winter overnight guests arrive by rental car, meaning that a total of 100 percent of those individuals arrive by auto. Table 9-12 confirms this, as it literally shows "0%" for every other travel mode for overnight guests.

Similarly, Table 9-15 shows that up to 100 percent of summer overnight guests arrive by auto, although it is unclear how many of the "Rental Car/Shuttle" guests are in rental cars and how many are on a shuttle.

In any event, it is clear that provision of 0.75 parking space per unit for one-bedroom condo hotel units will result in insufficient parking at Squaw Valley. If 100 percent of winter overnight guests arrive by auto, as revealed by Squaw Valley's surveys, a minimum of 1.0 space per unit will be necessary to provide adequate parking.

This is a significant issue, given that one-bedroom condo hotel units predominate in the proposed lodging scheme. The trip generation tables presented in DEIR Appendix G reveal that 1,118 of the 1,255 total units (after lock-off) will be one-bedroom units. Thus, 89 percent of the lodging units will have inadequate parking. Specifically, although one space per unit (i.e., 1,118 parking spaces) will be required for the one-bedroom units, only 0.75 space per unit will be provided (i.e., 839 spaces). The obvious result is a parking deficit of 279 spaces for that component of the proposed project.

The parking deficit specified here relates only to the one-bedroom units, but it is likely that corresponding inadequacies will apply to the two-bedroom and three-bedroom units. If each of those unit types has a similar parking deficiency of 0.25 space per unit, an additional shortage of 35 spaces would result, for a total parking deficiency of 314 parking spaces.

Although parking is not technically a CEQA issue, as noted earlier, the proposed project's trip generation estimate was based on the parking supply estimate. Further, such a substantial parking deficiency has implications with respect to air quality and greenhouse gas emissions, as late-arriving patrons will be forced to circulate through the parking facilities in a fruitless effort to find an available space. Moreover, the potential exists for vehicles to be queued out from the parking facilities onto Squaw Valley Road, as drivers search for the rare available parking spaces, with some of those drivers inevitably waiting in parking aisles for other drivers to depart, thereby blocking on-site traffic flow.

These potential environmental impacts, which have been ignored in the DEIR, must be addressed.

11. ***Inadequate Consideration of Construction Impacts*** – DEIR p. 9-66 states that project construction:

. . . would generate a substantial amount of truck and employee trips, which would use SR 89 and Squaw Valley Road to access the Village Area.

That page of the DEIR also says:

Construction activities are anticipated to require up to an estimated 136 construction workers during this most intense year of construction.

Because construction workers might be unlikely to ride-share, these 136 construction workers could generate 136 inbound trips in the AM peak hour and 136 outbound trips in the PM peak hour. In addition, other forms of construction traffic will occur during those peak-hour periods including deliveries of material and equipment, ready-mix trucks, food vendors, etc.

Comparing this volume of construction period peak-hour traffic to the project trip generation estimate suggests that a detailed traffic analysis for construction conditions is warranted. Specifically, DEIR Table 9-18 (p. 9-38) shows that 92 inbound trips are projected for the Saturday AM peak hour. This is at least 44 inbound AM peak-hour trips fewer than could reasonably be expected during the construction period. The project's outbound traffic estimate for the Sunday PM peak hour is slightly higher than the likely construction traffic volume (159 versus 136+), but the construction traffic estimate is considerable.

Given the likelihood that peak hour traffic volumes associated with construction activity will be generally similar to the volumes associated with the proposed project, it seems reasonable to expect that the impact of those trips on the study area intersections and road segments should be evaluated. Of course, the construction activity will primarily occur on weekdays, when background traffic volumes on the study area road system might be higher than on weekends. Therefore, the construction traffic analysis should address weekday AM and PM peak hours.

Although the DEIR claims that it would be "speculative" to perform any quantitative analysis, the fact is that sufficient project-related information is presented to allow such an analysis to be conducted.

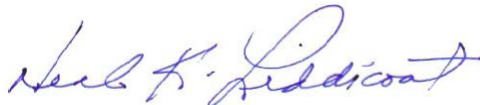
CONCLUSION

Our review of the Transportation and Circulation analysis incorporated into the Draft Environmental Impact Report for the proposed Village at Squaw Valley Specific Plan revealed several issues potentially affecting the validity of the conclusions and recommendations presented in that document. Of particular concern is the failure to address all of the time periods during which traffic impacts are reasonably likely to occur. We are also highly concerned about the deficient project traffic estimates employed in the analysis, and the related shortcomings in the analysis of emergency vehicle access, construction traffic impacts, and air quality and greenhouse gas emissions impacts. These issues and the others described above must be addressed prior to approval by Placer County of the proposed project and the related environmental documentation.

We hope this information is useful. If you have questions concerning any of the items presented here or would like to discuss them further, please feel free to contact me at (916) 783-3838.

Sincerely,

MRO ENGINEERS, INC.



Neal K. Liddicoat, P.E.
Traffic Engineering Manager